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The Medical Journal

VOL. 97 NO. 5

May, 1950

Post-Operative Care

Salt Excretion in Liver Disease

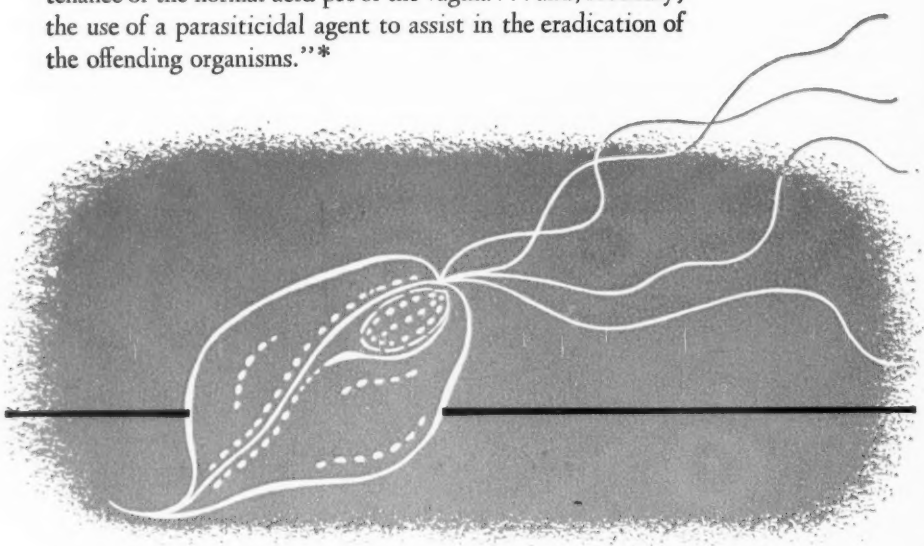
Carcinoma of the Breast

(See page 5 for Table of Contents)

OFFICIAL JOURNAL OF THE ILLINOIS STATE MEDICAL SOCIETY

Fulfils Both Treatment Objectives in Vaginitis Therapy

"The treatment of trichomonas vaginalis vaginitis . . . has pretty well been narrowed down and standardized to two fundamental components of treatment. One is . . . the maintenance of the normal acid pH of the vagina . . . and, secondly, the use of a parasiticidal agent to assist in the eradication of the offending organisms."*



Floraquin®

. . . a product of Searle Research—fulfils both treatment objectives. It supplies the powerful protozoacide, Diodoquin-Searle (5,7-diiodo-8-hydroxyquinoline) together with lactose, dextrose and boric acid for restoring depleted glycogen and reestablishing a pH unfavorable to vaginal infections.

G. D. Searle & Co., Chicago 80, Illinois

Floraquin Powder—for office insufflation
Floraquin Tablets—for patient's use

*Hardy, J. W.: Office Gynecology, J. Missouri St. M. A. 45:811 (Nov.) 1948.

SEARLE RESEARCH IN THE SERVICE OF MEDICINE

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The ILLINOIS Medical Journal

Official Journal of the Illinois State Medical Society

Harold M. Camp, EDITOR. Theodore R. Van Dellen, ASSOCIATE EDITOR.

EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry Culver, Walter Stevenson, Raymond W. McNealy, Arkell M. Vaughn, Edwin F. Hirsch.

Vol. 97, No. 5 May, 1950

WHAT NEXT?

This is the second anniversary of ACTH and Cortisone. These products still are scarce and less than a handful of Illinois physicians have had the opportunity to use them clinically. In the past, the second anniversary of any new drug would have established the product—either for rejection or acceptance.

ACTH and Cortisone have not followed this pattern. On the other hand, the physicians selected to use them are still enthusiastic, and, in this respect, we know the substances are living up to their reputation. Manufacturing difficulties have proved to be the bottleneck but in many respects the delay is welcomed. More time is needed to establish the safety of the drugs because unfavorable publicity at this time might discourage the further use of these products. In this respect, we hope that history does not repeat itself and that the hormone will not meet the same fate as did digitalis. The latter was held in disrepute for over one hundred years because physicians, including Withering, had not learned to use it properly.

The why, how and where of ACTH and Cortisone cannot be dismissed too lightly. These are academic questions but they have an important bearing on the cause and treatment of disease. The compounds have produced amazing results in many instances making it possible to turn on and off many diseases at will. The arthritic, for example, is relieved of his symptoms but is left with diabetes unless the dose is controlled. On the other hand when the drugs are withheld, the blood sugar and urine return to normal but the arthritis reappears. A tuberculous patient who received ACTH showed signs of improvement within seventy-two hours. The fever began to subside, the sedimentation rate dropped and his appetite improved. In time all signs of the disease disappeared with the exception of the sputum which remained positive. He was well but still infectious.

These phenomena were unheard of two years ago. They are food for thought and may change our concepts of disease and treatment. In the future, the etiology may lose its importance from a therapeutic standpoint; the problem will be tackled by nullifying the reaction of the body to this unfavorable agent. This is creating extensive speculation. Already we are beginning to hear of "alarm reactions", "diseases of adaptations", etc. This is an interesting era and we wonder what the next two years will bring.

Tuberculosis is preventable and eradicable. In the United States it causes one death every nine minutes. Illinois needs 3000 additional sanitarium beds.

HAVE YOU DONE YOUR PART?

Political medicine is a threat to our professional liberties. Most physicians appreciate this fact but too many have been lulled into a sense of false security believing that the battle can be won by a team of clever publicists and a handful of men interested in medical economic problems. But it can be done if we do our part by combating the grievances that are perpetuating the fight. The matter of fees is one of the objections to the medical profession; the other is the inability of the physician to provide 24 hour service.

We can say truthfully that the majority of physicians do not overcharge but like the rotten apple that spoils the barrel, the few that do overcharge are creating the examples for our opponents to use. The fees that most physicians charge are comparable with those of other professions and those who work on a commission basis. The laborer, for example, who at the moment is most prone to criticize, pays more in commissions for a new car than he does to his physician for a serious ailment. In addition, the family who has had occasion to call in a plumber or electrician, or have a television set installed, have paid bills equal, if not higher, than the average house call. But this is not all. Our fees are justifiable considering the investment of time and money that has been spent in preparing for the career, equipment, and cost of maintenance. Furthermore, the skill of the physician in an intangible something that is difficult to evaluate. In many instances it is priceless. The experience and knowledge that some have acquired is more precious than gold when a correct decision means saving a life.

On the other hand, it makes no difference what we think along this line as long as the voters feel that they are being over charged. Rationalization does no good because the fact remains that we now stand accused as a body. The public probably never has taken into consideration that we belong to a profession which has more than the ordinary opportunity to exploit our fellow man. We cannot, nor are we, being accused of this. Most physicians are fair, generous and trustworthy. The medical profession has made many advancements and the more diseases we can prevent and cure the better. To offset the criticism of our profession we must begin by taking action against the small minority who are breaking faith. This group, incidentally, will give us just as much trouble in case socialized medicine becomes a reality. A grievance committee should be considered seriously and the results publicized so that the people will know that a housecleaning is being carried on.

But this is not all. In this day and age the individual is entitled to an estimate of what medical service will cost. Nine times out of 10 this is possible but too many physicians wilt when it comes to a discussion of money matters. They are shy and embarrassed when confronted with this question instead of being dignified and positive as they are in matters related to health. This creates a bad impression, especially when the physician hesitates to speak about the fee and then sends a whopper of a bill. Many patients feel that they have a right to know what our costs will be because they are entitled to refuse to obligate themselves for a bill that is beyond their means. They do not appreciate the fact that most physicians would rather treat the patient first and worry about the bill later.

Nowadays dissatisfied customers know how to advertise their resentment. They write their friends, congressmen and newspapers. But this form of retaliation is nothing compared with the penalty that occurs when they climb on the band wagon and decide to vote for socialized medicine. Yes, it is going to take more than money to win this battle. Since most physicians value good-will above everything there is no reason why we cannot concentrate our efforts along this line.

ILLINOIS HAS A GOOD BOARD

STORIES go around. Public sympathy and public opinion are extended and developed among the American people suddenly and wholeheatedly. Let us keep it so.

"Refugee physicians" come in two classes, as do American physicians, and physicians through all the ages since Hippocrates — good ones and bad ones. Public sympathy must not allow poor physicians to establish their right to practice simply because they are "refugees from oppression in European countries". We must not lower our standards because of sympathy.

HOWEVER, on Bedloe Island in New York harbor stands a statue 155 feet high that has

reached to the stars, as the light of hope shines from her torch. More today than ever before, perhaps If these physicians come to us, men who are tempest tost in the seas of international conflict, we can sort the wheat from the chaff, and give those men who are good physicians, an opportunity to become good Americans, earning their living through the practice of medicine.

The Medical Examining Board of the Department of Registration and Education has had that responsibility throughout the past ten years. We hope they have flown their banner of requirements high — and kept the milk of human kindness in their hearts. We hope the men and women to whom they have given the right and privilege to practice medicine in the state of Illinois have become FIRST, good citizens of these United States, and SECOND, good practitioners of medicine.

One of the requirements for membership in the Illinois State Medical Society is citizenship; another is licensure in the State of Illinois. By this time we hope that the majority of these men have achieved both honors. Illinois does not want a good physician who is not a good citizen; neither do we want a good citizen who is a poor physician to be allowed to practice.

The following licenses were issued to graduates of foreign schools (other than Canadian graduates) during the past ten years.

1939 — 81	1943 — 27	1947 — 26
1940 — 119	1944 — 13	1948 — 25
1941 — 78	1945 — 11	1949 — 24
1942 — 33	1946 — 17	TOTAL — 454

454 is not a large number of people to whom we should teach the story of AMERICA.

MEN FIRST

Statisticians in the Metropolitan Life Insurance Company have reported new information that was most encouraging. They found that life is longer in the English speaking and Scandinavian countries; women live longer than men practically everywhere in the world except India and Russia which are at least two generations behind the United States in longevity.

The most recent data in longevity comes from New Zealand (1934-1938) where the expectation of life at birth is 67 years — the level reached among white persons in the United States in 1945. In Australia, it was 65.3; the Netherlands, 66.5, and Denmark, 66.7. In Germany, the figure was 61.4 in 1932-1934 which was practically the same as for the United States near that time. The most recent information available for Russia is for 1926-1927 when the expectation of life was 44.4 years. Records worse than this are found elsewhere for Asia and Africa. In 1931, India had a life expectancy at birth slightly less than 27 years which according to the Metropolitan Life Insurance Company, was not much higher than that estimated for ancient Rome two thousand years ago.

As always, women outlive men, especially in countries where the standards of health are high. The exception, of course, is India where health conditions are probably the poorest. The most recent bulletin from the Federal Security Agency reveals that the average length of life of white women in the United States has reached a new high of 71 years; the average for white men is 65.5 years. These were based on 1948 death rates. There is no ground here for arguments relative to our health situation.

PANCREATIC CANCER

. . . Undoubtedly the most important single advance has been that of bringing under surgical treatment that group of cancers which, though not all primary in the pancreas, so frequently involve this organ that cure can only be effected by its removal, either partial or complete. For convenience these malignant neoplasms have been designated collectively as pancreatico-duodenal. They include carcinoma of the ampulla of Vater, primary duodenal cancer, carcinoma of the lower third of the common duct, and, of course, pancreatic cancer. The successful treatment of these tumors by radical pancreatico-duodenectomy represents a truly recent development in the field of major surgery. *Excerpt: Newer Concepts in Surgery of the Pancreas, Charles G. Child III, M.D., associate professor of clinical surgery, Cornell University Medical College, Medical Annals of the District of Columbia, January,* 1950.

STATE DEPARTMENT OF PUBLIC HEALTH

Annual Medical Report
Division of Vocational Rehabilitation

Emmet F. Pearson, M.D.*
Springfield and
Duane D. Darling, M.D.*
Chicago

The Illinois Division of Vocational Rehabilitation was instrumental in rehabilitating into gainful employment 3301 citizens in 1949, most of whom were rehabilitated by correction of or improvement of a physical or mental handicap.

The medical program of Vocational Rehabilitation does not provide general medical care. The Division is primarily concerned with correction of disabilities of catastrophic proportions in individuals for whom the remedial measures are beyond their economic means and who are not entitled to services provided by other agencies. Economic need must be established after investigation of the family's resources. The aim of rehabilitation is to make the handicapped self-sustaining after which they should be able to provide for their own general medical care.

A major proportion of patients for physical restorative services have been referred by physicians, and the Division cooperates to the fullest extent with doctors of the state in carrying out their recommendations. If specialty services which are not available where the patient resides are necessary, the Division will provide care in the institution and by the specialist recommended by the referring physician.

The following are some of the rehabilitative services which were provided by this Division during 1949:

General Surgery:	
Herniotomy	74
Cholecystectomy	17
Hemorrhoidectomy	10
Thyroidectomy	3
Fistula-in-ano	9
Other General Surgical Operations	44
Gynecological Surgery:	
Hysterectomy	35
Other Operations	36
Neurosurgical Cases	17
Eye Surgery:	
Cataracts	18
Corneal Transplants	2
Other Surgical Cases	22

*Medical Consultants to the Division of Vocational Rehabilitation.

Otolaryngology:	
Fenestration Operation	12
Other Surgery	23
Thoracic Surgery	9
Urological Surgery	12
Orthopedic Surgery	103
Plastic Surgery	18
Patients hospitalized for diagnostic studies only	64
Patients hospitalized for correction of non-surgical handicaps	48
Patients evaluated by special Hearing Clinics	146
Patients treated by special Epilepsy Clinic, University of Illinois	253
Medical cases handled as out-patients	95
Out-patients for physiotherapy	23
Patients provided intensive psychiatric treatment	82
Artifical appliances supplied:	
Lower extremity limbs	554
Suction-type limbs	20
Upper extremity limbs	89
Hearing aids	540
Dentures	543
Glasses	137
Artificial eyes	28
Braces and other appliances	185

The Division will also provide care for certain medical patients whose disability may be relieved or controlled by a specific course of therapy. For example: regulation of diabetes by diet and insulin; control of epileptic seizures by proper medications; relief from bronchial asthma by investigation of cause, etc.; relief from rheumatoid arthritis when good judgment indicates a specific course of therapy may be effective; treatment for cardiac decompensation when evidence indicates that medicinal measures may materially relieve the disability; and cure of cancer when the prognosis is good and the recommended therapy offers a reasonable chance for recovery. After control of the disorder has been established, prolonged medical care is not provided by this Division.

The Division of Vocational Rehabilitation provides training for eligible clients who require training to overcome their handicaps. Occupational tools and equipment may also be provided if these items are the most feasible means of effecting the client's rehabilitaion.

Doctors who wish to refer patients to the Division of Vocational Rehabilitation for assistance may contact their district counselor or write to the state office, 700 E. Adams St., Springfield.

SYMPTOMS OF ACUTE CORONARY THROMBOSIS

Severe, vise-like pain in the substernal and precordial areas, the most characteristic manifestation in the acute stage of the coronary thrombosis, is present in about 60 per cent of cases and is variable or absent in the other 40 per cent. Though usually referred to the ulnar side of the left arm, the left side of the neck, occipital region, or upper mid or left abdominal regions, it may, when unusually severe, be felt on both sides of the neck, both arms, and the posterior portion of the thorax. It lasts 15 minutes or longer, gradually subsides over a period of 24 hours or more, and does not respond to nitroglycerin, amyl nitrate or rest.

Dyspnea and hyperesthesia of the precordial region are not uncommon. Occurrence of vomiting and associated dyspepsia often leads to the erroneous diagnosis of "indigestion" which is so frequently made, especially in young people. Sweating, pallor of the facies, and occasionally cyanosis may be noted. Associated sinus tachycardia or arrhythmias, such as premature contractions, paroxysmal tachycardia, auricular fibrillation or heart block, may produce palpitation. Other clinical manifestations, such as rapid, thready feeble pulse; cold, clammy skin; pallor; weakness; and decreased arterial blood pressure, all suggestive of peripheral circulatory collapse or shock, may be present. Excerpt, *Acute Coronary Thrombosis, George E. Burch, M.D., New Orleans, California Medicine, November, 1949.*

CORRESPONDENCE

SPECIAL NOTICE ON PREMATURE PROGRAM

As a result of a conference with the Superintendents of St. Francis Hospital, Peoria, St. John's Hospital, Springfield and Chrisan Welfare Hospital, East St. Louis, arrangements have been made to accept premature infants at the three Premature Centers as hertofore with the following changes:

1. When application is made for financial assistance in paying for the care of a premature baby, the new application form should be completed before the infant is transferred to the Premature Center. The information submitted thereon will be used to determine the ability of the family to contribute toward the cost of the care of their premature infant. That portion, if any, which the family can pay, is to be paid to the Center-hospital under arrangements made by the hospital with the family.

2. It is urged that hospitalization insurance be used where available. An assignment of insurance form should be signed at the time the infant is transferred to the Premature Center. Such insurance is assigned to the Center-hospital and not to the Department of Public Health.

3. The weight of infants eligible for care in which the Department of Public Health may make payment in 5 *pounds* or less.

4. Referral of the premature infant to the Premature Center may be made at any time. However, since the greatest risk to the infant occurs in the first 24 hours of life, referral made as early as possible gives the infant the advantages of care in the specialized Centers at the time of its greatest need.

These limitations do not apply to private cases, and the portion of the application form entitled "Parent's Statement for Care under Program" need not be completed for such cases. Ambulance service for private cases will be provided if requested, since specialized equipment plus skilled nursing care for premature infants is not otherwise ordinarily available.

It has been possible to relax the restrictions applied on January 27, 1950, owing to the availability of unexpected funds and to the high degree of cooperation by Center-hospitals in keeping the program going.

You are invited to make contact with the Center-hospitals for additional information regarding specific cases.

BANQUET HONORS HOYNE

Former students and friends of Dr. Archibald L. Hoyne are invited to attend a banquet to be given in his honor at the Congress Hotel, June 1, 1950, at 6:30 P. M. For further information please contact Dr. Rowine Hayes Brown, Cook County Hospital.

PAYMENT OF A. M. A. DUES

The office of the Secretary of the American Medical Association is receiving many questions concerning the payment of dues voted by the House of Delegates at its December 1949 meeting. Some of the questions and the answers offered by the Secretary's office are reproduced herewith for the information of The Journal's readers.

Question: Does the American Medical Association require the payment of dues by its members?

Answer: Yes. For the first time in its history, the members of the American Medical Association in 1950 will pay membership dues. These dues apply to all members of the Association except those in three specific categories.

Question: What is the amount of the dues for 1950?

Answer: $25.

Question: What are the American Medical Association 1950 membership dues of a physician who joins his country medical society after July 1?

Answer: Dues for physicians who become members after July 1, 1950, are $12.50. The dues for all members before July 1 are $25.

Question: Does a member who transfers from one state county to another pay American Medical Association membership dues a second time?

Answer: No. A member pays his American Medical Association dues only once in a calendar year.

Question: By what authority were the dues set at the $25 level?

Answer: On recommendation of the Board of Trustees and approval by the House of Delegates in December 1949 in accordance with the provisions of the Constitution and By-Laws of the American Medical Association.

Question: What members are exempt from the payment of American Medical Association membership dues for the year 1950?

Answer: (a) Members for whom the payment of dues constitutes a financial hardship as determined by their local medical societies.

(b) Members in actual hospital training for not more than five years after graduation from medical school.

(c) Members who have retired from active practice.

In all instances exemption may be allowed only if the member is also exempt from state and county medical society dues.

Question: To whom should the American Medical Association membership dues be paid?

Answer: To the local or state society, depending on the system of payment established by the state medical association concerned.

Question: When should American Medical Association 1950 membership dues be paid?

Answer: When the member receives his bill from his local or state society. No remittance of membership dues should be made directly to the American Medical Association.

Question: What is the relation between American Medical Association membership dues and Fellowship dues?

Answer: (a) The status of Fellowship and Fellowship dues has not been changed by the establishment of American Medical Association membership dues.

(b) Members may become Fellows—subject to approval by the Judicial Council—by requesting such status on a form supplied by the American Medical Association.

(c) Fellowship dues of $12 and membership dues of $25 are separate dues. Members who are or who become Fellows, therefore, pay a total, combined Fellowship and membership dues, of $37.

Fellowship dues include subscription to The Journal of The American Medical Association or to one of the special journals.

Question: What is a Service Fellow?

Answer: Commissioned medical officers of the Armed Forces and the United States Public Health Service and permanent medical officers of the Veterans' Administration may become Service Fellows of the American Medical Association on nomination by their chief medical officers and approval by the Judicial Council. Service Fellows are not required to pay Fellowship dues and do not receive any publication of the Association except by personal subscription.

Question: Must a Service Fellow be also a member of the American Medical Association?

Answer: No. Service Fellowship is a special category of Fellowship established for physicians in full time Government service, many of whom

are not eligible for membership in their local medical societies. However, a Service Fellow who is a member of a local medical society may elect to pay American Medical Association dues for 1950 and thereby continue his membership in the American Medical Association.

Question: What action is taken when there is failure to pay American Medical Association membership dues?

Answer: Members who are delinquent in the payment of American Medical Association dues for one year and who fail to pay such delinquent dues within 30 days after receipt of notification from the Secretary of the American Medical Association will forfeit membership in the American Medical Association. Retention of membership in the local and state medical societies under these circumstances will depend on the local action of those societies.—J. A. M. A.—April 1, 1950.

"YOUR MENTAL HOSPITALS" ILLINOIS NEUROPSYCHIATRIC INSTITUTE

The Illinois Neuropsychiatric Institute, a research and educational institution located on the Chicago campus of the University of Illinois, Professional Schools, is a joint undertaking of the Illinois Department of Public Welfare and the University of Illinois. The department of public Welfare is in charge of the overall administration of the building, whereas the administration of the clinics and scientific work is the responsibility of the University of Illinois.

The building consists of two towers nine stories high and a central connecting section two stories in height.

The Division of Psychiatry occupies the South Tower and is under the supervision of Dr. Francis Gerty, Head of the Department of Psychiatry. Various floors are devoted to wards for psychotic male and female adult patients as well as psychoneurotics. Facilities are available for all types of treatment including electric and insulin shock therapy, hydrotherapy, occupational and recreational therapy. Special research facilities are available for studies in neurophysiology, biochemistry, electroencephalography, psychology, and extensive animal laboratory facilities. One entire floor is currently being converted into a ward for children for the study of psychosomatic conditions, and cases will be assigned to this unit from the pediatric department of the Illinois Research Hospital.

The Illinois State School of Psychiatric Nursing, under the able direction of Miss Sarah Abrams, R.N. of the Department of Public Welfare, has provided affiliate training in psychiatry during the past year for 260 student nurses from nine nursing schools in the Chicago Area.

A very active out-patient clinic provides psychiatric care for many patients who are referred from various sources and agencies.

Medical Residents in Psychiatry from the Department of Public Welfare and the University of Illinois receive specialized training here in preparation for the Specialty Boards of Psychiatry.

Dr. Eric Oldberg, Head of the Department of Neurology and Neurological Surgery of the University of Illinois, has charge of the Neurosurgical Division which occupies the North Tower. Special wards are devoted to adult neurological and neurosurgical patients. In addition, there is a specialized unit for children's neurology and neurosurgery. The very latest equipment is available to facilitate the activities of the operation pavilion and the neurosurgical procedures. Two entire floors are devoted to laboratories and research facilities in neuroanatomy, neurophysiology and neuropathology. Out-patient facilities for neurological and neurosurgical cases provide this needed service.

Thus we see that every possible facility for the treatment, teaching and research in the field of nervous, mental and neurological disorders, both in children and adults, has been brought together in one building. Here, both psychiatry and neurology have the opportunity to work in their fields, and at the same time the advantages of interdependence and interrelationship are available. The collaboration of the neurological and psychiatric divisions in this one Institute insures mutual helpfulness and provides psychatric and neurosurgical care to many patients from the State of Illinois, as well as care for patients who have been transferred into the Institute from the eleven State Hospitals. G. A. Wiltrakis M.D. Deputy Director

"KNOCKER" GETS REPLY

March 29, 1950

Editor:—

In the March Journal, page 122, a "chronic knocker and yet a real booster", takes the History Committee to task because a third volume of the history has not yet appeared. He also offers some valuable suggestions. If the county societies would develop the sort of loose-leaf living history he suggests they would help, not only this Committee, but future committees which will carry this work forward. If the officers, councilors and members of the Society would take an active interest in its compilation, material would accumulate more rapidly and much interesting information not otherwise obtainable would be made available to the Committee.

But a word about the Committee and its work.

The Committee recommended to the Council that the Crerar Library be made the official depository of our historical data and this was done. That will preserve the data being collected so that we shall never lose it.

The Committee could have hired a professional writer who could have collected enough material and written a history that would have cost $20,000 or more and would have been unsatisfactory because of necessity a great deal of valuable and interesting material would not have been included. Instead it decided to employ trained librarians to gather the material which would eventually be used. So, Miss Ella Salmonsen, Miss Price and Miss Farmer have been busy all these months gathering, classifying and placing in readily available form, material that will eventually go to make up the history. They have not only done a great deal of work themselves but have enlisted the help of various members of the Woman's Auxiliary, who have also done a great deal of work—all this at comparatively small cost. Undoubtedly they will secure more help from this source as time goes on and more members become familiar with the work to be done.

The medical profession and the allied healing arts have played important roles in the development of this state. The record is so impressive that we cannot afford to do injustice to it by having the work skimpy and incomplete.

The dentists have been asked, through Dr. Lloyd Dodd, to contribute a history of their work. The nurses, it is hoped, will write of their accomplishments. The pharmacists will tell us of their developments. The hospitals should have a record of their accomplishments.

Medical men have built railroads, helped dig canals, founded churches and universities. They have had an important role in the development of education in general as well as that concerned solely with medicine. Dr. J. C. Goodhue is known as the father of Chicago's public school system. E. S. Kimberly helped to put the public school system of the state into effect.

Silas Hamilton of Otterville left $4,000 to found a common school. A monument to his memory erected by one of his former slaves still stands in Otterville.

John Evans founded Northwestern University. He also founded medical journals and helped to build two railroads—the Pennsylvania from the state line to the Union Station and the Union Pacific from Denver to Evanston, Wyoming. On the latter he made $500,000 which he gave to the City of Denver. Evanston, Illinois, Evanston, Wyoming, and Mount Evans in Colorado are named after him.

Shurtleff College was named for Dr. Shurtleff

Illinois physicians indulged in group practice a century before the New Deal planners appeared on the scene. Doctors Doke, Dunn and Watkins in Dr. Lane's district had such an arrangement about 1850.

Medicine and medical men have had great influence not only in the healing arts but also on the general development of the state. Physicians have been editors, congressmen, U.S. senators and one was ambassador to Russia. A number have been authors of note.

The Committee is already indebted to more men and organizations than can be enumerated in this space. But a few should be mentioned. Dr. Helga Ruud has written the story of women in medicine. E. B. Montgomery has furnished a great deal of material. Dr. F. Garm Norbury has sent us the history of Morgan County, Dr. Maloney, one of Winnebago County. C. H. Phifer is securing the history of one downstate county. Dr. Cross and B. K. Richardson have contributed a history of public health in Illinois. Dr. D. J. Davis, our Permanent Historian, has contributed much in ideas and guidance.

Pickard and Buley in the "Midwest Pioneer"

have contributed a great deal of material. Their book has a foreward: "To the pioneer doctor who boldly faced the wilderness; and to the pioneer who bravely faced the doctor."

Mr. Knocker and Booster, thanks for the help. Please call again.

"A Committee Member"

NINETEEN CLINICS FOR CRIPPLED CHILDREN LISTED FOR JUNE

Doctor Herbert R. Kobes, director of the University of Illinois Division of Services for Crippled Children has released the June schedule of clinics for physically handicapped children. The Division will conduct 19 general clinics providing diagnostic orthopedic, pediatric, speech and hearing examinations along with medical social and nursing services. There will be 4 special clinics for children with rheumatic fever and 2 for cerebral palsied children.

Clinics are held by the Division in cooperation with local medical and health organizations, both public and private. Clinicians are selected among private physicians who are certified Board members. Any private physician may refer or bring to a convenient clinic any child or children for whom he may want examination or may want to receive consultative services:

The June clinics are:

June 1—Litchfield, St. Francis Hospital
June 6—Fairfield, Masonic Temple
June 7—Rock Island (Cerebral Palsy)—St. Anthony's Hospital
June 8—Elmhurst, (Rheumatic Fever)—Memorial Hospital of DuPage County.
June 8—Springfield, St. John's Hospital
June 8—Glenview, Village Hall
June 9—Chicago Heights (Rheumatic Fever)—St. James Hospital
June 13—E. St. Louis, Christian Welfare Hospital
June 13—Peoria, St. Francis Hospital
June 14—Hinsdale, Hinsdale Sanitarium
June 15—Rockford, St. Anthony's Hospital
June 20—Watseka, County Court House
June 21—Aurora, Copley Hospital
June 22—Normal, Brokaw Hospital
June 23—Chicago Heights (Rheumatic Fever)—St. James Hospital
June 27—Peoria, St. Francis Hospital
June 27—Effingham (Rheumatic Fever)—St. Anthony's Emergency Hospital
June 28—Chicago Heights, St. James Hospital
June 28—Springfield (Cerebral Palsy)—Memorial Hospital

Approximately 9,003 visits were made to the 167 general clinics held during 1949 and 12,054 individual examinations made.

556 attended the 43 rheumatic fever clinics held during 1949 and 266 attended the cerebral palsy clinics with 266 individual examinations made.

During 1949, 3,892 children were placed on register of the Division.

Approximately 1,652 children received private physician's service through the Division and 2,523 visits were made outside of clinics, hospitals and convalescent homes during 1949.

These diagnostic clinics are conducted by the Division in cooperation with local medical and health organizations. The physicians who serve on the various clinics staffs are private physicians who are certified Board members. The follow up work on the children is based largely upon their recommendations for treatment and care. Private physicians may refer or bring children to a convenient clinic for examination or consultative service.

ILLINOIS MEDICAL SERVICE (BLUE SHIELD) (Formerly Chicago Medical Service)

National Progress of Blue Shield

There are now 69 Blue Shield Plans operating in 38 states. In all of the ten states which have no Blue Shield Plan there are one or more medically sponsored plans either in operation or in the process of organization, which are not members of the Associated Medical Care Plans, hence are not known as Blue Shield Plans. If these non-profit, medically sponsored, non-member plans were added to the list there would be 79. The name "Associated Medical Care Plans" has been changed to "Blue Shield Association," giving cognizance to the importance of the Blue Shield symbol and name.

The total enrollment now exceeds 14,250,000, with 3,900,000 new members gained in 1949 — a 34 per cent increase over 1948. For the first time in history, Blue Shield in 1949 showed a greater net enrollment gain than Blue Cross.

Illinois Medical Service now has an enrollment of approximately 180,000.

As of September 30, 1949, averages of 70 reporting plans showed a reserve of $1.74 per member; 13.19 per cent of income was paid for operating expenses; and 5.93 per cent of income was set aside for reserves. During 1949 Blue Shield Plans paid approximately $100,000,000 for medical services.

Since a majority of Blue Shield Plans have approved the formation of a National Enrollment Agency, efforts are now being made to obtain sufficient contributions from the Plans so that a new corporation may be formed for the purpose of coordinating and servicing accounts on a national basis.

Service and Indemnity Plans

Two thirds of the Plans are now on a service basis, the remainder being of the indemnity type. When a service plan is in effect, physicians accept the scheduled amounts as payments in full for those whose income does not exceed a certain figure, being privileged, of course, to charge more when such income limit is exceeded. There is increasing public demand for this type of plan with realistic income limits of from $4,500 to $5,000 for a family. Such a limitation will include 80 per cent of families in most areas and warrants a sufficiently high premium to increase the scheduled payments appreciably. Where such Plans have been in operation, it appears that the physicians' income has not suffered and the public seems better satisfied.

Special situations and varying conditions require contracts which are designed for particular purposes. Illinois Medical Service is studying various contracts and intends to make them available if and when the time appears propitious.

Whichever type of contract is offered the public, the universal acceptance and cooperation of the medical profession remains the key to Blue Shield success.

It is well recognized that one of the most potent weapons against federalized control of medical care is the enrollment of a sufficiently large percentage of the population in the voluntary plans. And to obtain such enrollment, contracts realistically designed to supply the needs of the people are essential.

Regrettably, the record of Illinois relative to the percentage of population enrolled in medically sponsored plans has not been outstanding. The total enrollment in the Illinois Plan (through commercial insurance companies, sponsored by Illinois State Medical Society) and the four non-profit Plans — Illinois Medical Service (formerly Chicago Medical Service), the Blue Shield Medical Surgical Plan of Illinois (Alton), the Northern Illinois Medical Service Corporation (Rockford), and the Rock Island County Medical Service — is small as compared with that in many other states, based on a percentage of population.

Frederick W. Slobe, M.D.
Secretary

SPECIAL TRAIN TO SAN FRANCISCO

The Council of the Illinois State Medical Society has approved the running of a special train from Chicago to San Francisco and return to take physicians and members of their families to the annual meeting of the American Medical Association. The special train will leave Chicago Wednesday, June 21. The route to Denver will be on the Burlington Railroad, then to Salt Lake City over the Denver and Rio Grande, and the Western Pacific on to San Francisco. Stop overs at interesting scenic points on the way are being arranged.

Three tours have been arranged, the first is the complete tour from Chicago to San Francisco and return to Chicago, with stop overs at several points. The second is from Chicago to San Francisco only, and independent return. The third, for those travelling to San Francisco independently, but returning from that city with the tour.

The special train will arrive at the San Francisco Ferry early Saturday evening, June 24, to give everyone a chance to get their accommodations in the convention city, and be ready for the meeting. Among the points of interest for the return trip, are the route to Los Angeles using the Southern Pacific, and stop over at Los Angeles, where some interesting tours have been arranged.

The trip continues on the Santa Fe to Grand Canyon, with a full day to inspect this scenic spot, and meals at the El Tovar Hotel. The re-

turn to Chicago from Grand Canyon is on the Santa Fe Railroad.

Complete details may be received by writing W. M. Moloney, GAPD, Burlington Route, 105 West Adams Street, Chicago 3, Illinois, Room 711. A copy of the illustrated folder will be sent to all inquirers giving complete details and the overall cost of the trip.

The plan has been approved by the State Society Council, and the railroads jointly are preparing the schedules, and informative data, and will do everything possible to make the trip one never to be forgotten. Stop overs and special tours are included for Denver, Salt Lake City, and through the Feather River Canyon by daylight. The costs include trips in and around Los Angeles, and accommodations at the Ambassador Hotel. The stop at Grand Canyon has been carefully arranged to give a full day at this famous scenic place. The trip has been well planned, and it will appeal to those expecting to attend the A.M.A. meeting in San Francisco.

MEDICAL OFFICERS WANTED

The United States Civil Service Commission has announced that it is accepting applications for Medical Officer positions paying $5,400 and $6,400 a year, and for Medical Officer (Specialist) positions paying $7,600 to $10,000 a year. The positions to be filled are located in various Federal agencies in Washington, D. C.; in the Railroad Retirement Board in Chicago, Illinois; in the U. S. Public Health Service, the Children's Bureau, and the Indian Service, located throughout the United States and in Alaska; and in the Panama Canal Service in the Panama Canal Zone.

To qualify for these positions, applicants must be graduates of a medical school with the degree of doctor of medicine. For most of the Medical Officer positions paying $5,400 a year, applicants must have completed a full internship. For Medical Officer (Specialist) positions, except in the fields of general medicine and surgery, administrative medicine, and adjudicative medicine, applicants must have had a full internship in the specialized field for which they apply or at least 1 year of postgraduate study or 1 year of full-time training as a resident in the specialty. for all positions paying $6,400 and above, professional medical experience is required. No written tests are required.

The maximum age limits for these positions are as follows: For the Panama Canal Service, 45 years; for the Indian Service, 50 years for Medical Officer positions and 55 years for the Specialist positions; and for other agencies, 62 years. For persons entitled to veteran preference, the 45, 50, and 55-year age limits are extended to 62 years, and the 62-year age limit is waived without limitation.

Full information regarding these positions is given in announcement No. 217 and in Examining Circular No. 24. These notices may be consulted at most first- and second-class post offices, or copies may be secured from civil-service regional offices or direct from the U. S. Civil Service Commission, Washington 25, D. C. Applications will be accepted in the Commission's office until further notice.

FORUM ON CLINICAL ANESTHESIOLOGY

The Illinois Society of Anesthesiologists will present a Forum on Clinical Anesthesiology on May 27-28 at the Drake Hotel in Chicago. The program will include papers on "Bedside Control of Fluid Balance", "Modern Trends in Blood Therapy", "Anesthetic Emergencies", and "Xylocaine" by experts in their field. A novel feature of the program will be an "Information Please" panel of five-minute papers on basic anesthesia subjects, followed by a question period. Guest speaker for this meeting is Doctor Ivan B. Taylor, Professor of Anesthesiology at Wayne School of Medicine in Detroit.

All physicians and medical students are cordially invited to attend the scientific sessions.

THE AMERICAN CONGRESS OF PHYSICAL MEDICINE

Will hold its twenty-eighth annual scientific and clinical session August 28, 29, 30, 31 and September 1, 1950 inclusive, at the Hotel Statler, Boston, Massachusetts. Scientific and clincal sessions will be given on the days of August 28, 29, 30, 31 and September 1, 1950. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

"CHICAGO MEDICAL SOCIETY — A.M.A. CONVENTION AIR SPECIALS" TO SAN FRANCISCO AND THE HAWAIIAN ISLANDS

Now is the time to make plans to attend the A.M.A. convention and to participate in the official A.M.A. Post Convention Tour to the Hawaiian Islands.

A Special Flight to San Francisco and return on a United Air Lines Mainliner 300 (DC-6) is being sponsored by the Chicago Medical Society, and *Illinois State Medical members and their wives are invited to participate.*

San Francisco is only 8 hours from Chicago — Honolulu 9½ hours from San Francisco by clean, comfortable air travel, which permits you to spend more time at your office, yet miss nothing at the convention. Air travel will enable you to spend your vacation in the Hawaiian Islands and save days in travel enroute.

The schedule of "The Chicago Medical Society — A.M.A. Convention Special" is as follows:

	— Going —		
Lv. Chicago	12:00 Noon (CST)	Sunday, June 25, 1950	(nonstop)
Ar. San Francisco (approx.)	6:00 PM (PST)	Sunday, June 25, 1950	
	— Return —		
Lv. San Francisco	12:00 Noon (PST)	Saturday, July 1, 1950	(nonstop)
Ar. Chicago (approx.)	8:50 PM (CST)	Saturday, July 1, 1950	

Air Fares — Chicago to San Francisco and return (meals furnished — no tipping):

	Fare	*Tax*	*Total*
Round trip for one adult (10% discount on return)	$216.20	$32.43	$248.63
One way for one adult	113.75	17.06	130.81

Family rates are effective on Special Flight — one way prorated each:
Husband full fare — wife and any number of children 12 to 22 yrs. half fare —

Husband and wife	85.32	12.81	98.23
Husband and wife, one son or daughter (12 to 22 yrs)	75.84	11.37	87.21
Husband and wife, two sons or daughter (12 to 22 yrs)	71.10	10.67	81.77

Children from 2 to 11 inclusive, half fare. Children under 2 yrs. free.

San Francisco — Honolulu flight schedules and fares:

	— Going —		
Lv. San Francisco (day flight)	10:30 AM (PST)	Ar. Honolulu	6:05 PM (H.T.)
Lv. San Francisco (night flight)	11:45 PM (PST)	Ar. Honolulu	7:20 AM (H.T.)
	— Return —		
Lv. Honolulu (day flight)	9:00 AM (H.T.)	Ar. San Francisco	7:45 PM (PST)
Lv. Honolulu (night flight)	8:15 AM (H.T.)	Ar. San Francisco	7:00 AM (PST)

Round trip for adults (including 20% discount on return)	288.00	43.20	331.20
Children under 12 years of age — half fare	144.00	21.60	165.60

Please complete, detach and mail the coupon below with your check *now* to be assured of the reservations you need.

Dr. Elmer V. McCarthy, Chairman Transportation Committee,
Chicago Medical Society,
30 N. Michigan Ave., Chicago 2, Ill.

Please make reservation for me on "The Chicago Medical Society A.M.A. Convention Special" as follows:

Chicago — San Francisco — Chicago (round trip) ( )

Chicago to San Francisco (going) ( )

San Francisco to Chicago (return) ( )

My hotel in San Francisco will be .....

Lv. San Francisco for Honolulu (date) .....

Lv. Honolulu for San Francisco (date) .....

My check to The Chicago Medical Society in the amount of $..... is enclosed.

Name ..... Address .....

City ..... Telephone .....

If you have any questions, write Mr. M. M. Mathews, United Air Lines, 35 E. Monroe St., Chicago 3, Illinois, or telephone RAndolph 6-5500 before you send in your coupon.

HISTOPLASMOSIS IS ON THE INCREASE

Histoplasmosis appears in forms which differ in degree of severity. There is the generalized fatal form, which is seen most frequently in rather extreme age groups, childhood and past 40. Then, there is the asymptomatic form, in which the diagnosis is made by the skin test and confirmed by the presence of pulmonary calcification with a negative tuberculin test. This asymptomatic form is endemic in the Eastern Central states and in several states just west of the Mississippi.

In cases of the generalized fatal form there is usually a febrile process with progressive weakening ending in death within two years. Some symptomatic findings are hepatomegaly, enlarged lymph nodes, splenomegaly, lesions of the lungs, and ulcerative lesions of any portion of the skin and mucous membranes.

The diagnosis is usually made by a biopsy of an accessible lesion. The skin test is of value but may give positive reactions to immunologically related organisms such as blastomycosis. However, a negative test can almost certainly verify absence of this disease. Presence of calcification of the lungs, with a negative tuberculin test, is highly suggestive of histoplasmosis, particularly when a skin test is positive. *Excerpt, Histoplasmosis of the Larynx, Morey Parkes, M.D., and Samuel Burtoff, M.D., Washington, Medical Annals of the District of Columbia, December* 1949.

OPPORTUNITIES FOR CIVILIAN MEDICAL PERSONNEL IN THE PACIFIC ISLANDS

The President has decided that Administrative responsibility for Guam and American Samoa, which are U. S. possessions, and for the Trust Territory of the Pacific Islands, which comprises the former Japanese mandated Marshall, Caroline, and Marianas Islands, will be transferred from the Navy Department to the Department of the Interior. An Executive Order makes this transfer of responsibility effective on Guam on July 1, 1950. The transfer in American Samoa and the Trust Territory is scheduled to take place on July 1, 1951.

It is planned that naval officers and enlisted personnel serving in these island governments will be replaced with civilians before the transfer dates. Each island area has hospital facilities, small island or village dispensaries, and public health organizations. Medical work in these islands, in view of the great need for health services, the varied nature of medical problems, and the differing cultures of the people, offers an important challenge to doctors and other medical personnel.

Guam has a population of about 75,000, of whom 27,000 are Guamanians. The Guam Memorial Hospital, a temporary structure with 250 beds, including TB wards and a staff of nine medical officers, serves primarily the Guamanian population. It is operated by the Guam Government and shares some facilities in common with the adjoining naval hospital. In this medical center are schools for native medical assistants, dental assistants and nurses, which are attended by Guamanians, Samoans and Trust Territory islanders. It has been planned that a permanent, fully-equipped hospital will be built for civilians in Guam in the near future.

American Samoa has a population of over 19,000, almost all of whom are Samoans. The island government maintains a 200-bed hospital, built in 1945-46, and a staff of five medical officers. Since 1912, a training school for Samoan registered nurses has been in operation.

The Trust Territory has been under American administration since the occupation of the islands during and after World War II. The territorial government has established six 50-75 bed general dispensaries, each with a staff of two or three medical officers. These hospitals or dispensaries are located at Saipan in the Marianas, Yap and Koror in the Western Carolines, Truk and Ponape in the Eastern Carolines, and Majuro in the Marshalls. In the smaller islands health work is cared for by native health and nurse aides. A small leprosarium is maintained at Tinian in the Marianas.

In establishing medical positions for the governments of these three areas, the Department of the Interior will follow federal classifications, but applicants need not be on a Civil Service register to be eligible for appointment. Positions for physicians, public health officers, hospital administrators, laboratory technicians, pharmacy technicians, and nurses are available. Salaries for doctors will range from $6400 to $8800 per anum. A post differential of 25% in addition to salary is allowed at present for employees stationed in the islands. Transportation is paid for employees and their dependents. Housing is excellent in Samoa and though of an advanced base type in Guam and the Trust Territory, is adequate for tropical conditions. Houses are furnished and rents are reasonable.

Further information regarding opportunities for health work in the Pacific Islands can be obtained from the Division of Territories and Island Possessions, Department of the Interior, Washington 25, D. C.

ORIGINAL ARTICLES

Post-Operative Care of the Surgical Patient

Max S. Sadove, M.D. and Reuben C. Balagot, M.D.
Chicago

Progress has been made to the degree that in the ususal case, the patient is well cared for during the entire surgical procedure. In most instances, he is also fairly well prepared for the operation. But, the management of the average post-operative patient leaves a great deal to be desired. The post-operative period and the innumerable sequelae stemming from the anesthesia and the operative procedure are unappreciated by a great number of individuals concerned. The fact remains that this period is treated lightly in spite of the hazards which may arise from the various physiological and pathological changes that occur at this time.

If one were to follow the customary sequence of events following the operative procedure, one would find the surgeon directing his interne to "give him the usual." This statement is indicative of exactly what they get — "the usual." This "usual" is frequently inadequate post-operative care.

From the Div. of Anesthesia, Research and Educational Hospital Univ. of Illinois.

Presented before the General Assembly, 109th Annual Meeting of the Illinois State Medical Society, May 16, 1949.

The following comments may serve as a guide to some practical points on post-operative care.

HANDLING OF PATIENT:—There must be gentleness in handling the patient. Any abrupt motion or any degree of rough handling may precipitate an episode of shock due to the fact that the patient is unable to adjust to the sudden hydrostatic changes. This may be caused by a vasomotor paralysis from the premedication or the anesthesia. There need not have been a great deal of blood loss. Simply by brusquely moving or turning the patient from the cart to his bed is enough frequently to start a series of events resulting in marked hypotension. There must be an absolute minimum of movement. The ideal thing, of course, is to have the patient awake immediately at the termination of surgery so the accommodative factors may be as active as possible during the transport to the ward. If possible, it would be well to move the patient directly into his own bed in the operating room.

CONTINUOUS OBSERVATION BY CAPABLE PERSONNEL:—This is a very important phase of post-operative care, especially in

the immediate post-operative period. Observation must not be taken literally to mean watching a patient by just anyone who can count the pulse rate or take the blood pressure. Observation here refers to competent care of the patient by capable personnel from the time the patient leaves the operating table until such time as one is convinced that the patient's condition is safe enough to be left in the hands of the usual post-operative surgical nurse.

Competent observation implies at the very minimum that (1) there is a patent airway, (2) the skin color is good, (3) the pulse is adequate, of good quality, rate, and rhythm, and (4) the blood pressure remains within normal physiological limits.

The blood pressure presented by the patient coming from the operating room is often well within the range of normal physiological variations so that the individual managing the patient is afforded a feeling of false security. The individual who writes the postoperative orders should know how much and what kind of vasopressors were used, what anesthesia was used, how much blood was lost, and other similar important factors. Thus he knows where he stands and will not be surprised should the patient develop shock. What may be an adequate blood pressure may be a false picture. It may have been sustained by vasopressors, CO_2 accumulation, certain anesthetics like cyclopropane, and probably stimulation from the operative procedure. Suddenly, all these props are removed and the patient's blood pressure promptly falls into the true picture of shock. Then again, what may have looked like a normal blood pressure was just a temporary rise in the blood pressure brought about by fluids masking the true picture. Since the body will rapidly eliminate any great amount of excess fluids and salts dumped suddenly upon it, the sustaining effect of these fluids on the blood pressure is temporary.

The observer must be aware of any change in the over-all appearance of the patient. He should check the dressings for any undue bleeding or constriction especially those that bind the lower thorax and neck. All too frequently, one waits for the appearance of cyanosis or other emergency signs before cutting the dressings.

Competent observation must include preparedness and the ability to counteract the sequelae which may result from vomiting. All patients, regardless of the type of anesthesia (it might be well to emphasize at this point that this includes pentothal) might be expected to vomit. This implies that an efficiently working suction machine must be available, not in a few minutes' notice but at a moment's notice. An adequate airway must be maintained at all times during these trying moments. It would be ideal to have the patient in 10° Trendelenburg and on his side or in the prone position.

Some people are fond (especially in operations about the head) of placing the patient in a Fowler's position. This may prevent bleeding from the operative site by posturally reducing the venous pressure. But, this may be subjecting the patient to a greater danger of hypoxia and shock by reducing circulating blood to the vital centers. The hazard of aspirating vomitus if he vomits is tremendously increased in this position. It may be a good rule to prohibit the reverse Trendelenburg or Fowler's position until the patient is completely recovered from the anesthetic.

It is important not to apply too many blankets and hot water bottles so as to overheat the patient. More harm than good may be done by overheating a patient, especially one going into shock or already in shock. Dilating the peripheral vessels with heat may divert much needed blood from the vital centers to the skin. It has been recommended that the optimum temperature for the patient in shock is around 95° to 96° F.

FLUIDS.—Intravenous fluids are frequently stopped upon completion of the operative procedure because of difficulty of maintaining the transfusion. This may be dangerous. Where there is fear of shock, one should have intravenous fluids running continuously. Blood and vasopressor drugs can then be given in a hurry when necessary. It may be difficult to start an infusion once shock has occurred.

This brings us to the question of fluid requirements. A definite idea of the daily amount of fluids needed by the patient must be known before ordering it. This usually should not exceed 3,000 cc in a 24 hour period. Administration of fluids in large amounts may inadvertently lead to pulmonary edema. Fluids should not be limited to saline solutions. Only enough saline to supply the daily requirement—approximately 5 G., should be given. The rest may be made up

with dextrose solutions or the now available protein hydrolysates and amino acid preparations to spare protein reserves in the tissues, and probably promote healing. Blood and Plasma may be used as required.

The rate of infusion should be around 60 drops per minute. The practice of giving the daily requirement in a couple of hours is frequent but erronious.

THE RESTLESS PATIENT, AND OXYGEN:—Occasionally, upon finding the post-operative patient restless, the uninitiated is tempted to give morphine or some other sedative. It is important to consider that the restlessness may be due to hypoxia. Especially is this true after long procedures and those involving the cardio-respiratory systems. The real need is oxygen. The oxygen itself will correct the restlessness. Slowing of the pulse rate after oxygen administration certainly confirms the necessity of oxygen. Morphine may correct the restlessness at times but the anoxemia may continue to injure the patient.

Oxygen may be administered in any one of several ways:

1. *Oropharyngeal Catheter.* This method has its disadvantages, e.g. a local drying effect, perhaps a dehydrating process, and the inconvenience of changing the catheter frequently (once every 12 hours). Also, in inserting the catheter, one must be sure that the catheter tip can be seen beyond the soft palate but that the patient is not swallowing boluses of oxygen. The farther the catheter is introduced and the greater the rate of flow of oxygen, the higher will be the O_2 content in the alveoli. But the greater will be the hazard from swallowing oxygen. This may actually cause perforation of the stomach.

2. *B. L. B. or O. E. M. Masks.* The B. L. B. and the O. E. M. types of masks have as their advantages the high oxygen concentration available to the patient, lack of danger of inflation of the gastro-intestinal tract, and the absence of a drying effect. Their disadvantage is that they are frequently not tolerated because the patient does not like things about his face.

3. *Oxygen tent.* The only good point about this technic is its cooling effect. Its supply of oxygen to the patient is relatively poor, and the explosion hazard is greater.

4. *Positive Pressure Mask.* This has the same advantages and disadvantages as the BLB mask plus the added advantage of positive pressure for such conditions as cardiac failure and pulmonary edema.

Restlessness is occasionally seen in patients who have "emerged from their anesthetic" sufficiently to feel pain and are not yet awake enough so that their actions are the same as the "awake" patient. This patient should be given some intravenous analgesic to relieve his pain. He will then go to sleep and when he wakes up the marked restlessness will have disappeared because the analgesia is still present from the drug given and the depressant effect of the anesthetic will have disappeared.

ANALGESICS:—It's about time we stopped "killing the patient with kindness." Too often, morphine in doses much too large are administered in the post-operative period. It cannot be emphasized too greatly that small doses of opiates are more than adequate in the post-operative period. Aside from its analgesic effect, morphine in small doses, up to a sixth (1/6) of a grain has a dilating action on the bronchioles. In larger doses, it has a constrictive effect aside from diminishing the cough reflex, inhibiting ciliary activity and depressing the respiratory center. The cough reflex is a protective device of the tracheobronchial tree, and, used effectively, is the "clean-up man" of the chest. The use of analgesics p.r.n. is to be condemned wholeheartedly. It is practically an open invitation to pneumonia, although, of course, the antibiotics have more or less alleviated the situation. Still, by keeping the patient quiet with analgesics, the possibility of atelectasis and pneumonia is markedly increased.

"STIR-UP REGIME":—One of the most important things that can be done for the post-operative patient, especially where there is danger of chest complications is the "stir-up regime." This calls for early mobilization of the patient, not necessarily ambulation, but movement in bed from side to side, and movement of the arms and legs. The patient, if possible, should be made to turn himself instead of being turned by an assistant; the patient's effort aids in activating himself. This movement must be enforced and it should be recorded just as one records the blood pressure, pulse, respiration and temperature.

This regime also includes the use of carbon dioxide to stimulate respiration. Our use of carbon dioxide is to permit the gas to flow over the face of the patient thus admixing with air instead of oxygen. In this way, the deep respirations initiated aerate the bases of the lungs as well as aid in the elimination of inhalation agent. The hyperventilation caused by the CO_2 also helps infiltrate behind any plugs present in the tracheobronchial tree a mixture containing approximately 80% nitrogen. Thus, if the patient were to cough at any later time, he would have a gas with which to expel the plug. This would not be the case if one were to use a mixture of carbon dioxide and oxygen, as this mixture would be absorbed from the alveoli in a matter of a half-hour. (However, one must not forget to encourage deep breathing — six to ten deep breaths every fifteen minutes. The patient should also be instructed to cough a few times every half hour, especially if there are any secretions present. Of course the carbon dioxide will aid in production of coughing and deep breathing.) The "stir-up regime" should as mentioned previously be recorded on the chart as though it were a dose of an opiate or similar agent.

SUMMARY

Some practical points in the post-operative care of the surgical patient are suggested:

1. *Handling of patient*: There must be gentleness in all movements; any roughness or sudden movements may precipitate shock.

2. *Continuous observation by capable personnel* to check on pulse, blood pressure, airway, color, temperature, dressings, position, and overall appearance of the patient. Prepardness to counteract the effects of vomiting at a moment's notice is essential.

3. *Fluids, salts and other requirements*: Fluids must be available in the immediate post-operative period. There is always the danger of giving too much fluid and salt. Dextrose and amino acids in solution may be used to complete the volume of fluids necessary.

4. *Oxygen and the restless patient*: Restlessness may be due to hypoxia; and oxygen given as advocated by the oropharygeal catheter method may relieve it. Restlessness may be a result of the anesthetic agent. This is relieved by morphine.

5. *Analgesics*: Their use should be reduced to an absolute minimum or avoided when possible. They usually diminish the useful cough reflex and depress respiration and movement.

6. *"Stir-up Regime"*: Early mobilization of the patient short of ambulation. Carbon dioxide inhalation is advocated. This stimulates deep respirations which help eliminate anesthetic agent and may help expel mucous plugs.

USE OF EXPERIENCE

The learned man is often blind to new experience because the mass of knowledge he has acquired seems to him complete, and he sits, old, weary, and disinterested, among his hoards, looking with lack-lustre eyes on any new treasure that is offered to him for acceptance. The ideal is the man of learning and wide classified experience, who is yet able to see and appreciate at its proper value the new fact which does not fit into its appropriate niche. Such are our geniuses. Such was Hunter. Such are Einstein and Fleming. *Excerpt*: *The Use of Experience, Southern Medicine and Surgery, November,* 1949.

Salt Excretion in Liver Disease

Jennings Fershing, M.D. and Lyle A. Baker, M.D.
Hines, Ill.

That chronic liver disease is associated with disturbed water metabolism has been known since the beginning of this century.[1,2,3,4] The retention of sodium chloride in cirrhotic patients may at times exceed the avidity for salt occurring in congestive heart failure.[5] A lesser but measurable degree of retention of fluid and salt occurs in acute infectious hepatitis.[6] There exists a difference of opinion regarding the therapeutic value of salt restriction in the decompensated cirrhotic patient. Some authors make no attempt to restrict salt or water in their regimens,[7] while others believe that salt restriction with certain qualifications[8] should be part of the management of chronic or subacute liver disease. This report describes the salt tolerance of five cirrhotic patients with varying degrees of clinical edema or ascites, one case with acute hepatitis, and two patients with no evidence of liver disease, who served as controls for the procedure and methods employed in this study.

Procedure.—Five cirrhotic patients, two normal patients, and one patient with hepatitis were selected for study. None had any clinical evidence of kidney or cardiac disease. Patients were placed on a neutral ash diet containing 1.8 gm. of sodium chloride and providing 2123 calories daily. An attempt was made to maintain fluid intake at 2000 cc. daily, but some patients refused this amout of fluid. The intake of fluid, output of urine, body weight, and urinary excretion of sodium and chloride were measured daily. All patients were on this regime five to ten days prior to the day of the experiment.

On the day of the experiment the patient received the usual diet, and total fluids including the intravenous infusion was kept at 2000 cc. At time 0 hours, 400 cc. of 5% solution of sodium chloride containing 20 gm. was injected intravenously over a period of thirty minutes. Venous blood samples were collected at 0, 1, 6 or 7, and 24 hours for determination of serum sodium and chloride. Urine was collected in 2 to 6 hour periods and specimens were analyzed for sodium and chloride.

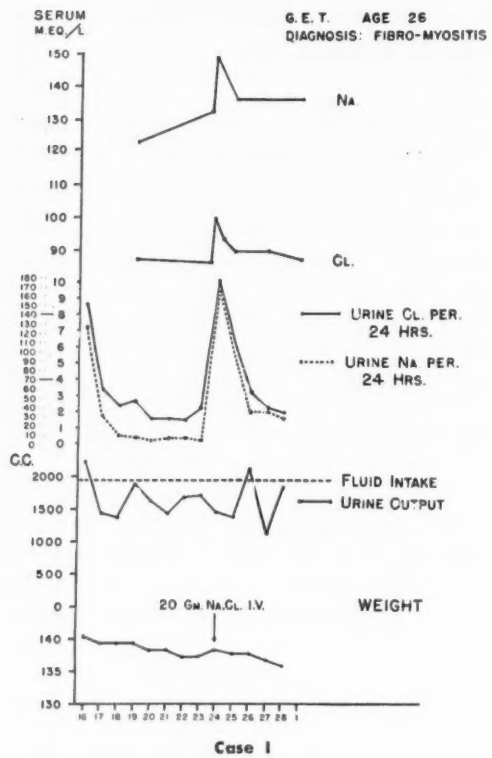
From the Medical Service, Veterans Administration Hospital.

Studies carried out on the day after the experiment and on subsequent days were the same as prior to the experiment. Some patients complained of thirst after the administration of the 5% saline solution but no untoward reactions were noted. Normal subjects on an unrestricted salt intake will excrete a large dose of salt in three to four days as compared to four to five days on a low salt intake. (9,10) Most of these earlier studies were done on the basis of chloride determinations only. This study confirms the fact that sodium excretion closely parallels chloride excretion with the regimen described.

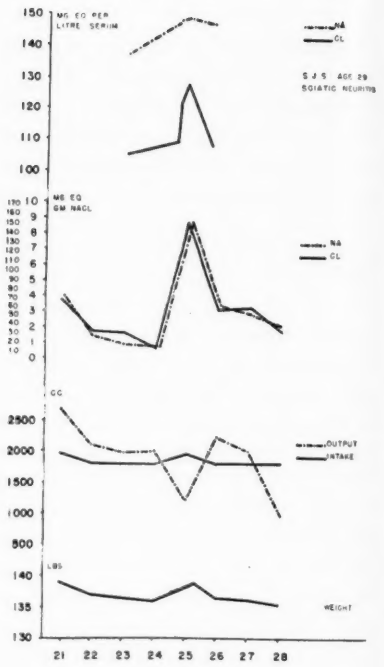
Analytical Methods.—Urinary and serum sodium were determined by the method of Butler and Tuthill.[11] The Volhard-Arnold procedure was used to measure urinary chloride.[12] Serum chloride was estimated by the method of Whitehorn.[13]

CASE REPORTS

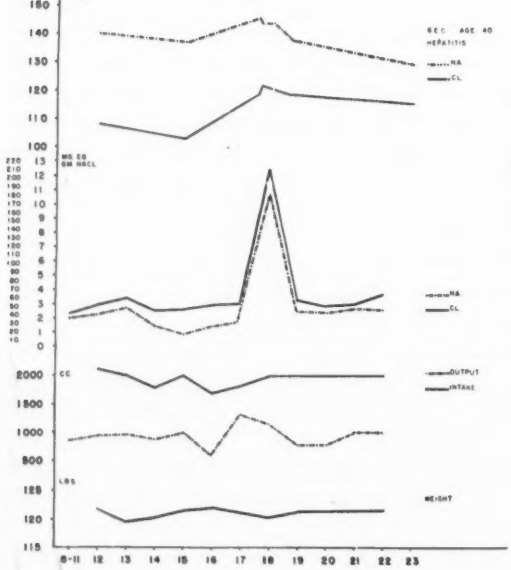
Case I: First control patient, G. E. T., was a 26 year old white male who was being treated for a fibro-myositis during February 1947. His kidney function, as judged by a concentration and dilution test, was normal. It is noted that the patient maintained a total water intake of 2000 cc. daily throughout the study. There was a slight weight loss during the course of the study. On the eighth day of this regimen he was given 20 gm. of sodium chloride intravenously. At the end of one hour there was an increase of 13 m.eq./liter in serum chloride and 16 m.eq./liter in serum sodium. The serum concentrations of these ions returned almost to the base level at the end of twenty-four hours. This same type of response was noted in the cases of cirrhosis. This normal subject, during the first twenty-four hours after the infusion of salt, excreted chloride equivalent to 10 gm. of sodium chloride. The excretion of sodium was only slightly less than this. On the subsequent four days he excreted 6.4, 3.3, 2.3, 1.8 gm. of chloride as sodium chloride and again the sodium excreted was almost the same. On the fifth day after the experiment he had reached the base level from which he had started. Under ordinary conditions, during which a subject is not losing ex-



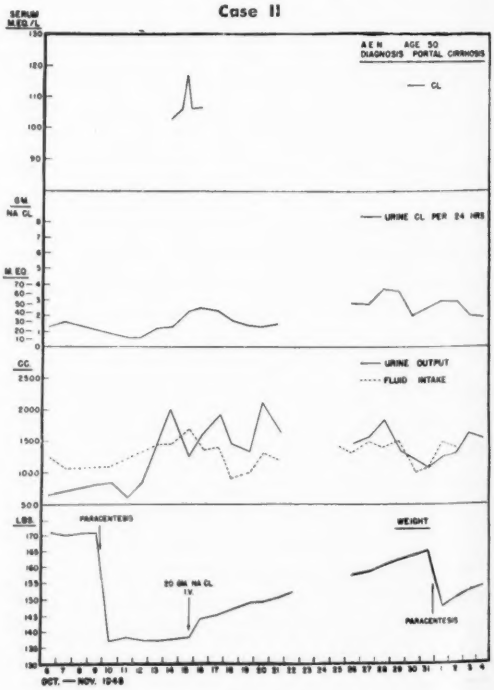
Case I



Case II



Case III



Case IV

cessive amounts of salt by way of the gastrointestinal tract or the skin, the normal subject will excrete during the first day almost half of a large dose (20 gm.) of salt.

Case II: Second control patient, S. J. S., was a 29 year old white male with mild sciatic neuritis who was studied during June 1947. During the first twenty-four hours after the salt infusion there was an 8.5 gm. excretion of salt. On subsequent days this was 3.1, 3.2, and 1.7 gm. This decreased urinary excretion was probably in accord with the increased loss of salt by way of the skin during this time of the year.

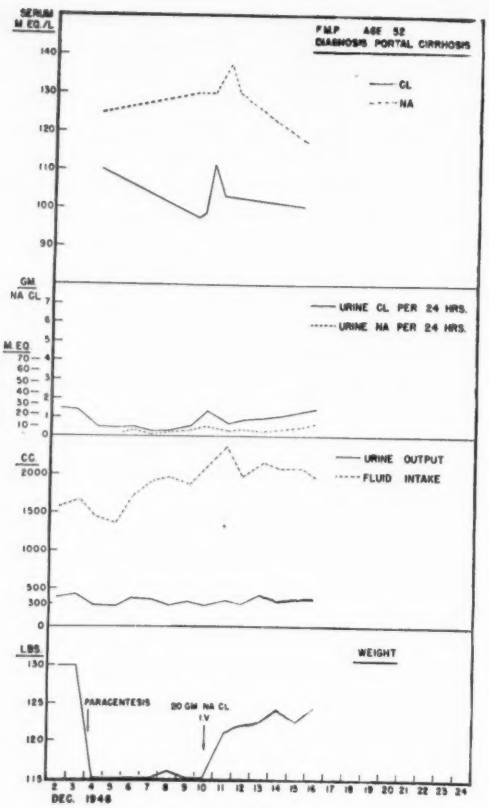
Case III: A patient with acute hepatitis was studied in August 1947. G. E. C., a 40 year old white male was admitted with a history of myalgia, arthralgia of two weeks duration and anorexia, vomiting and malaise of four days duration.

Jaundice was present for six days prior to admission. The liver was palpable and tender. Serum bilirubin was 11.8, cephalin flocculation 4 plus, bromsulfalein test showed 20% retention. On August 27th the serum bilirubin and cephalin flocculation were normal. Patient was discharged September 16, 1947. The response to salt administration on the seventeenth day of his illness was similar to that of the normal control cases. He excreted about 10 gm. of salt within the first twenty-four hours. There was little change in the serum levels of sodium or chloride, and there was no significant change in weight.

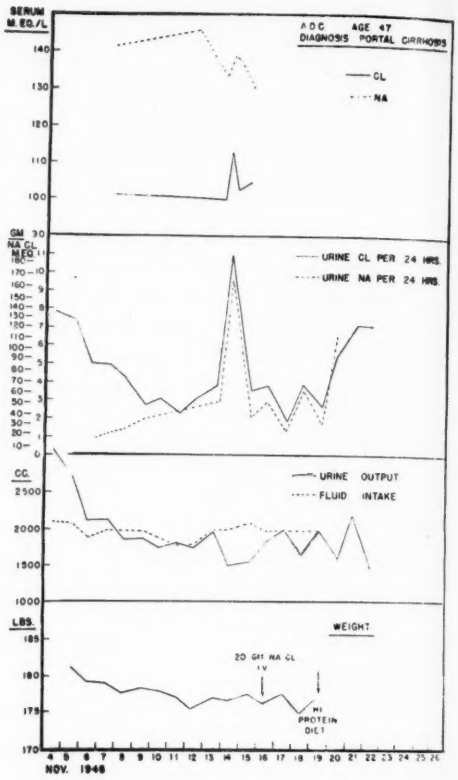
CASES WITH CIRRHOSIS OF THE LIVER

Case IV: A. E. N., a 50 year old white male, was the first patient with portal cirrhosis studied. He had been admitted in October 1945 with abdominal distress and abdominal swelling of ten months' duration. He was an alcoholic of long standing. Jaundice had been noted three months prior to admission. On admission the liver was moderately enlarged, the spleen was not felt, and there was marked ascites. Plasma protein levels ran from 6.0 to 7.2, with an A/G ratio of 1. Bromsulfalein retention was 14% at the end of an hour. Cephalin flocculation was 2 plus to 4 plus. Icterus index was 75 on admission and was down to 10 by March 1946. Concentration and dilution test and phenolsulfonphthalein excretion were normal. The patient was carried on a high protein, high carbohydrate, low fat diet with the usual supportive therapy including crude liver extract intramuscularly, multiple vitamins and choline orally. He required an abdominal tap every twelve to fourteen days. The patient's clinical course was static at the time of this study, in October 1946. This patient was studied over a long period of time and could not be kept on a fixed diet as were our other patients. The sodium chloride content of his diet varied from 2 to 3 gm. a day. No sodium determinations were done on this case. The water intake was also not controlled since the patient refused to take more than 1500 cc. daily. Disregarding these factors, the graph shows a retention of a large amount of the salt given intravenously. He only excreted 2.2 gm. of sodium chloride during the first twenty-four hours of the experiment, and 2. 5 gm. on the second day. It is noted that there was a prompt increase in weight after giving the salt infusion. There was a remarkable increase in abdominal girth, but no peripheral edema within twenty-four hours. He continued to accumulate fluid but at a slightly reduced rate on the low salt intake.

Case V: F.M.P., age 52, admitted October 28, 1946 with weight loss, weakness, rectal hemorrhage, and ascites of three months' duration. He admitted to drinking "six whiskies" daily for thirty years. He appeared cachectic, with pallor, ascites, dilatation of the veins on the abdomen, hepatomegaly, and external hemorrhoids. He required several transfusions. Serum bilirubin 1.2 mg. Plasma albumin 3.7 gm. and globulin 3.1 gm. Caphalin flocculation 2 plus. Kidney function test was within normal range. Icterus index was 35 on admission and 8 at the time of the study. Abdominal paracentesis was performed on three occasions prior to the experiment and again one month after the experiment. This subject was very much like the first cirrhotic case presented. It should be noted that even though his intake was maintained at 2000 cc. per day there was a continued urine output of less than 500 cc. daily. The chloride excretion expressed as sodium chloride was less than 0.5 gm. per day. On the first day of the experiment he excreted only 1.4 gm. of sodium chloride, and on subsequent days it was less than 1 gm. a day. The sodium excretion was hardly detectable. Again one notes the prompt gain in weight on the day following the experiment. Patient was discharged on February 26, 1947.



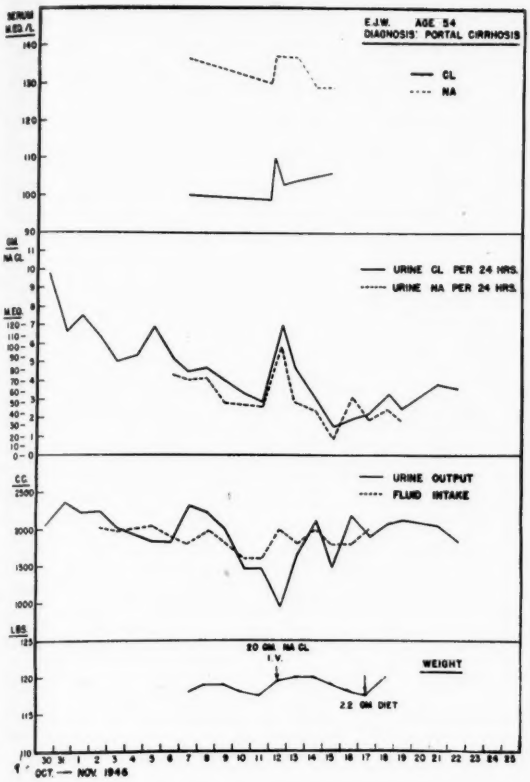
Case V



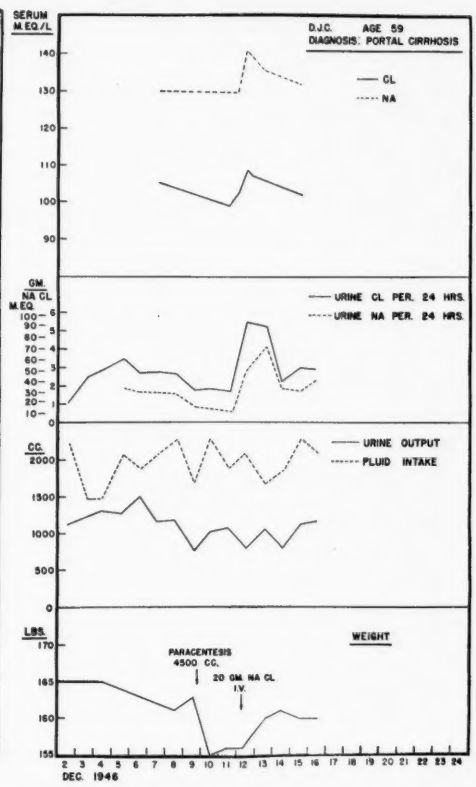
Case VI

Case VI: A. D. C., age 47, admitted September 18, 1946 with a history of intermittent jaundice since March 1945. Patient admitted to being a heavy drinker of whiskey and beer since 1920. Ascites was first noted in August 1946 and a paracentesis had been performed at that time. Patient was slightly jaundiced on admission and spider nevi were present on the face. Blood pressure 170/106. Only one paracentesis was performed, on September 21, 1946 and an enlarged liver and spleen were palpated at that time. The kidney function tests were not remarkable. Icterus index was 18 on admission and 10 at the time of study. Bromsulfalein retention 22%. Cephalin flocculation was 2 to 4 plus. The A/G ratio was 1 with the albumin usually 3.3 gm. or more. At the time of study the patient still had slight ascites and edema of the legs. Judging from the data, however, his ability to excrete salt was not seriously impaired. During the first twenty-four hours following the salt infusion almost 8 gm. of chloride as sodium chloride were excreted. He excreted a total of only 3.6 and 3.8 gm. on the second and third days. The sodium excretion was similar to the chloride excretion. There was no significant change in weight. Apparently this patient, at the time of study, was able to handle salt and water in almost a normal fashion and was slowly excreting the accumulated edema fluid. Patient was discharged November 27, 1946 A.W.O.L.

Case VII: E. J. W., age 54, admitted July 13, 1946 with a history of abdominal distention and moderate swelling of the lower extremities of three weeks' duration, and melena and jaundice of three days' duration. He admitted being a heavy user of alcoholic beverages for many years. The liver was moderately enlarged and the spleen was not palpable. Icterus index was 80. Serum albumin was 3 gm. or more with an A/G ratio of 1 most of the time. The cephalin flocculation was 3 plus to 4 plus. The concentration and



Case VII



Case VIII

dilution test and phenolsulfonphthalein excretion were normal. At the end of October 1946, when this patient was studied, the ascites, edema and jaundice had cleared completely. An abdominal tap was never performed in this case. The therapy was as described above and the patient was discharged January 10, 1947. Although he was compensated, the data show that he excreted only 4 gm. of the 20 gm. administered on the first day of the experiment and a little less than 3 gm. on the second day. The sodium excretion followed the chloride excretion closely. Apparently this patient's salt tolerance was poor and it seemed one could predict an early recurrence of edema if he continued on a large salt intake. Although no follow up study was done on this case, reexamination in Janary 1948 revealed no recurrence of edema or ascites while on a low salt diet.

Case VIII: D. J. C., age 59, admitted November 20, 1946 with ascites of three months' duration, and a questionable alcoholic history. The liver was greatly enlarged but the spleen was not felt. There was no dependent edema or jaundice. Icterus index 9.6. Thymol turbidity 15 units. Plasma albumin 4 gm. Globulin 3 gm. Bromsulfalein retention 20% at the end of one hour. The graph shows a decline in the weight curve, some increase in urine output and chloride excretion at the onset of the study. This was probably a reflection of his improved salt and water metabolism. A paracentesis was done on December 10, 1946 — mostly for diagnostic purposes. 20 gm. of salt were administered on December 12, 1946. A total of 5.5 gm. of salt was excreted the first day and 5.3 gm. the second day. There was a weight gain of about three pounds at this time. The patient's weight remained stationary at this level while under observation. Patient was discharged January 4, 1947.

Results:—The control studies demonstrate the variation in salt retention obtained at different temperatures. During the winter as much as 12 gm. of the 20 gm. administered may be excreted on the first day. In the summer urinary

FIGURE 1: SUMMARY OF DATA ON THREE PATIENTS STUDIED

Subject, diagnosis	Time after injection of salt (hours)	Date	Urine Vol. per 24 hrs. (cc)	Urine Chloride per 24 hrs. (m.eq.)	Urine Sodium per 24 hrs. (m.eq.)	Serum Chloride (m.eq. per liter	Serum Sodium (m.eq. per liter)
Case I		2/19/47	1900	45.5	9.9	87.5	123.5
(G.E.T.)		20	1650	28.2	7.5	....	....
Fibro-		21	1450	27.4	8.95	....	....
myositis		22	1712	27.1	9.1	....	....
		23	1725	38.4	5.6	....	....
20 gm. NaCl I.V.	0:0	24	....	....	....	86.2	133.2
	1:0		....	....	....	99.7	149.2
	6:0		....	....	....	93.3	84.4
	24:0		1465	183.2	168.9	90.2	136.5
		25	1390	110.0	97.9	....	....
		26	2130	55.5	36.6	....	....
		27	1130	38.8	38.2	90.2	143.5
		28	1840	31.5	31.0	87.5	136.5
Case VII		11/7/47	2330	76.6	69.4	100.0	136.5
(E.J.W.)		8	2270	81.6	75.0	....	....
Portal		9	2010	69.0	48.8	....	....
cirrhosis		10	1440	56.7	....	....	....
		11	1450	47.0	44.7	....	....
20 gm. NaCl I.V.	0:0	12	....	....	....	99.0	130.0
	1:25		....	....	....	110.0	137.0
	7:10		....	....	....	103.0	....
	24:0		898	119.4	100.4	104.0	137.0
		13	1620	79.4	50.0	....	....
		14	2110	50.6	41.2	....	....
		15	1475	25.4	16.3	106.0	129.0
		16	2185	33.7	55.0	....	....
Case V		12/5/46	260	8.0	2.8	110.0	125.0
(F.M.P.)		6	365	9.1	6.3	....	....
Portal		7	350	6.0	....	....	....
cirrhosis		8	285	6.4	5.1	....	....
		9	343	9.8	6.3	97.5	130.0
20 gm. NaCl I.V.	0:0	10	....	....	....	98.8	130.0
	1:20		....	....	....	111.5	130.0
	24:0		267	23.6	8.1	103.2	138.5
		11	350	12.6	3.9	....	....
		12	290	15.3	4.7	....	....
		13	410	16.8	3.8	....	....
		14	325	19.5	....	100.4	117.0

Table I: Summary of data in three illustrative cases.

Case I: Patient with fibro-myositis exhibiting normal response to intravenous saline. After administration of 20 gm. of salt I.V. there is a urinary Cl. excretion of 183.2 m.eq. in the first twenty four hour period.

Case VII: Patient with portal cirrhosis and no ascites exhibiting moderately impaired response to intravenous saline. The first twenty four hour excretion of Cl is 119.4 m.eq.

Case V: Patient with portal cirrhosis and ascites exhibiting marked retention of salt after administration of intravenous saline. The first twenty four hour excretion of Cl is only 23.6 m.eq.

excretion on the first day may fall off to only 7 gm.

The one patient with hepatitis responded much the same to the test with salt as did the controls. This patient was studied at a stage of the disease when the disturbance in salt and water metabolism was subsiding. Other observations[6] made early in the course of hepatitis suggest that there is a significant but often subclinical salt and water retention.

Of the five patients with cirrhosis of the liver, two patients (Cases 4 and 5) demonstrated marked retention of salt and water. The excretion of salt even over a period of days after the adminstration of the challenge dose was only 5 to 6 gm. Cases 4 and 5 illustrate the characteristic limitation of salt excretion by patients with chronic ascites requiring repeated abdominal paracenteses, whose course is usually not reversible. A. E. N. is still receiving paracenteses at regular intervals as at the time of this study.

The other three cases of cirrhosis are of interest in that their response to salt administration was more normal than the first two cases. Case 6 showed a normal response which was in keeping with his clinical status. Case 7, who was studied after edema had cleared, showed an impaired response to salt, although not as severe as our first two cases. This patient remained under medical observation for five months and there seemed to be a correlation between the impaired ability to excrete salt and his clinical course. The third patient in this group, Case 8, although not treated for as long a period as Case 7 exhibited a similar response to salt and apparently was alike in clinical course.

DISCUSSION

Some of the numerous factors involved in the production of edema are portal hypertension, an anti-diuretic substance, the relative oncotic pressures of plasma and asctic fluid. The cycle of events leading to the production of edema and the characteristic ascites of hepatic decompensation can at this time be described only in terms of the few known factors involved. No distinct relation between the presence of edema and serum protein levels were found by us and other investigators.[14,15] Yet in some instances the fact that the administration of human serum albumin is important in reducing ascites has been shown by several investigators.[16,17] We have had a similar experience.

The anti-diuretic substance demonstrated in the urine of cirrhotic patients has already been mentioned.[14] A physiologically similar substance has been demonstrated in the urines of patients with Bright's disease, Cushing's disease, premenstral edema, eclampsia and in uncomplicated dehydration.[18,19] It is possible that this substance plays a part in other states of salt and water retention such as congestive heart failure, nutritional edema, and perhaps even myxedema. It has not been reasonably demonstrated that the anti-diuretic factor is specific in cirrhosis of the liver.

This study has suggested to us that the mechanics of salt and water retention in congestive heart failure and decompensated cirrhosis may be similar, as far as the kidney is concerned. It has been shown that reduction in renal plasma flow and glomerular filtration rate were the fundamental factors in retention of salt and water in heart failure.[20,21] Patek, et al[22] found these to be normal in three patients with decompensated cirrhosis, but all three patients showed a significant rise in glomerular filtration and plasma flow after therapy with human serum albumin. Borst[23] emphasizes the importance of lowered blood volume and lowered cardiac output in the retention of salt and water by the kidneys. He believes that in cirrhosis of the liver the obstruction of flow in the portal system causes insufficient venous return and lowering of the cardiac output. In patients with cirrhosis, he believes the diuresis caused by injecting the patient's own ascetic fluid is the result of the increase in blood volume and cardiac output.

McKee, Whipple, et al[24] produced ascites in the dog by constricting the vena cava above the diaphragm. They state: "This type of experimental ascites drains the body protein reserves, reduces the level of circulating plasma proteins, and in effect is an internal plasmapheresis. High protein diet tends to decrease the ascites but the protein content of ascitic fluid may increase. Sodium chloride increases notably the volume of the ascites which accumulates and the total ascitic protein output increases. High protein diet low in sodium salts gives minimal ascitic accumulation under these conditions." This data supports the contention that salt limitation is of value in the management of the decompensated cirrhotic.

From these studies and others, it has been

demonstrated that salt and water retention is small and of short duration in acute infectious hepatitis. Clinically, there is little reason to restrict salt or water in most cases of infectious hepatitis. Patients with cirrhosis have a more pronounced degree of aberration. Some patients (Cases 4 and 5) excrete very small amounts of salt. We believe that in such instances a low salt diet may be of importance in long term care. Our limited experience tends to bear this out.

The other three cases (6, 7, and 8) clinically resemble cases 4 and 5, yet they showed a lesser degree of salt retention. Salt restriction is of value in these instances also, but since salt tolerance improves relatively quickly the restriction of salt may be discontinued at an earlier date. It may be that the degree of salt retention is more closely correlated with the degree of portal hypertension than with any other factor. Since the evaluation of the degree of portal hypertension has always been clinically elusive, it may be that salt tolerance is a useful method of estimating portal hypertension.

SUMMARY

1. The excretion of a large dose of salt (20 gm.) administered intravenously was studied in two normal individuals, one patient with acute hepatitis, and five patients with decompensated cirrhosis of the liver.

2. Normal individuals given a large dose of salt intravenously, excreted about 50% in twenty-four hours, as measured in the urine, and the remainder in three to four days. There is a greater urinary excretion in cool weather. The normal ratio of sodium to chloride excretion is between .9 and 1.0. This ratio is maintained in cirrhotic patients.

3. Patients with acute heptatitis, after the first week of illness, do not retain significant amounts of a similar dose of salt. Salt restriction is only of minor importance in most patients with acute hepatitis.

4. Of five patients with decompensated cirrhosis of the liver, two demonstrated marked retention of salt. Salt restriction has a place in long term management of cirrhosis with ascites.

5. Three patients with decompensated cirrhosis showed a lesser degree of salt retention. Salt restriction in this type of patient is therapeutically indicated in the acute phase of illness, and may be discontinued when salt tolerance improves.

6. This study suggests that there is a fair degree of correlation between portal hypertension and salt tolerance. It may be that salt tolerance is a clinically applicable method of evaluating portal hypertension.

We wish to thank Prof. Smith Freeman for his suggestions and criticisms during the course of this study.

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Carcinoma of the Breast

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Consideration of statistics from various sources indicate that more than 17,000 Americans die annually from carcinoma of the breast, having lived an estimated average of 42 months after discovery of the lesion; about 4 percent of all adult women develop this fourth commonest of malignant diseases, responsible for 12 percent of all deaths from carcinoma. It seems reasonable to assume that there are between 60,000 and 70,000 patients living at any one time with breast carcinoma and that a majority of these depend upon the general practitioner or general surgeon for diagnosis and for definitive treatment. While collectively the experience of average physicians with breast carcinoma is large, individual experience outside large clinics is necessarily small; rough calculation on the basis of the above figures indicates that the average physician may expect to see one patient with breast carcinoma every 18 months, one with early carcinoma less frequently.

Avoiding controversy regarding numerous theoretic and technical variables considered to affect the success of surgical treatment, it may be stated with assurance that earlier diagnosis and more critical limitation of the use of extensive surgical dissection can improve postoperative survival rates. Earlier diagnosis depends upon increased patient-suspicion and earlier patient-discovery of lumps in the breast.

According to a recent cancer survey[1] about one-half of the adult population of the United States understand the significance of at least one cancer symptom; of this half, about one-third recognize the cancer-importance of a lump in the breast or elsewhere. This number exceeds, by from 40 to 1650 percent, the numbers recognizing any one other symptom. Relatively few of the individuals questioned in this survey had received their information from physicians. Yet lay knowledge of the proper method and periodicity of self-examination of the breasts, leading to the earlier discovery of abnormalities, can best be imparted by the physician examining supposedly normal breasts.

From the Hektoen Institute, the Breast Tumor Clinic and the Department of Surgery, Cook County Hospital, and the Department of Surgery, Stritch Medical School of Loyola University, Chicago.

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In previous paper[2] we emphasized the cancer-importance of the apparently innocuous lump in the breast; we wish here to emphasize the significance attaching to the complaint of lump. In a series of 500 patients consecutively admitted to our clinic with breast complaints, and later followed for at least one year, 313 complained of "LUMP" or "PAINFUL LUMP". Seventeen of these were found to have no breast disease, 45 to have diffuse densities, no dominant lumps. Two hundred fifty-one were found to have lumps distinguishable from diffuse granularities, nodularities and areas of increased density considered characteristic of the benign mastopathies. Our pre-biopsy diagnosis in 139 of these lumps was "benign lesion"; at biopsy 7 were found to have carcinoma. Among the 112 in whom the pre-biopsy diagnosis was carcinoma. 11 were shown at biopsy to have benign lesions. One hundred eight (34.5 percent) of the 313 patients with the complaint of lump had carcinoma; only 9 carcinomas were found among the 168 patients whose admission complaints had been pain, bleeding nipple, nipple discharge, painful swelling or rash. Lump or painful lump had been the initial complaint of 92 percent of our patients with carcinoma.

In addition to the finding of a lump, visible retraction signs (seen when earliest present only on manipulation of the breast) were significant though not pathognomonic for carcinoma. These signs, due to shortening of Cooper's ligaments, were dimpling, "plateau" sign, other contour changes, and changes in the nipples. The latter consisted of alteration in the level, in the axis of point, in the rhythm and degree of elevation on arm raising, the presence of eczema, ulceration or loss of elasticity. We have seen all these signs in connection with breast lesions shown later to be benign, as we have noted clinical findings considered characteristic of moderately advanced breast carcinoma occasionally to be associated with harmless lumps. Among our breast carcinomas without axillary spread (Group I) 31.5 percent had a pre-biopsy diagnosis of benign lesion because of the absence of findings other than lump. Errors would have been more numerous had the presumptive diagnoses proved erroneous at biopsy represented individual rather than group opinion.

During the progress of this evaluation of our diagnostic accuracy we have treated palliatively, and studied, numerous unfortunates suffering from hopeless carcinoma recurrent after radical surgery performed at our hospital or elsewhere. When data pertinent to these patients and upon which diagnosis and selection of operation might have been based was available to us, it had often been incompletely recorded. Hence we have been unable to attempt critical retrospective analysis of the causes of failure of what we presume to have been expectedly "curative" treatment. It is, however, our firm opinion that uncritical selection of the extent of surgical treatment shares responsibility for such poor results with erroneous or delayed diagnosis. We believe that whenever possible it is preferable to perform mastectomy of the indicated extent at the time the frozen section is reported positive. The indicated extent can be decided only if the operation then in progress has been preceded by thorough search for distant metastases and evaluation of local findings to attempt prediction of incurability. It is because we consider diagnosis and classification so closely linked that we present here our procedure in selection of the extent of surgical treatment. It is based upon opinion not entirely derived from our own material; we are indebted for much of it to the numerous authors who have suggested methods of clinical classification.

Remote metastases which can be discovered on physical examination are in the supra-clavicular, intercostal, para-sternal, inguinal and opposite axillary lymph glands, in the lungs, the opposite breast, the skeleton and the abdomen (falciform ligament, liver, pelvis). At present we "x-ray-survey" the skeleton from vertex to elbows and knees, with chest plates for both soft parts and bone, and with laterals of the spine, in an attempt to discover how extensive the x-ray examination must be in order not to miss the earliest asymptomatic bony metastasis of breast carcinoma.

Local findings characteristic of long duration or rapid growth of the tumor have been shown by Haagenson[3] to be associated with extremely low curability, hence reliably to indicate probable remote extension. We are convinced that use of the radical operation for lesions apparently Group II but actually in Group III unjustly worsens (statistically and in each individual's

experience), the reputation of what is, when indicated and properly performed, an almost perfect surgical procedure. We attempt careful clinical classification of each breast lump on the presumption that it may be carcinoma; even though we find no indications of remote spread, we do not select extensive resection as the surgical treatment of choice in the presence of the following local findings:

Extensive skin edema, (more than 1/3 of skin of the breast);
Inflammatory carcinoma;
En cuirasse carcinoma;
Ulceration of axillary nodes;
Edema of the arm, or
Tumor of more than 6 cm. diameter.

There are local findings of lesser importance in the prediction of incurability, also well-defined through retrospective analysis of the statistics of failure[4]. We consider any two of the following to constitute an absolute contra-indication to extensive surgery; fixation of the tumor to the chest wall; skin nodules near the tumor; edema of less than one-third the skin of the breast; ulceration of the tumor; axillary nodes if more than three are palpable, one is more than 3 cm. in diameter or they are fixed to chest wall or axillary contents; development of the tumor during pregnancy or lactation and a previous operation of limited extent.

Results observed in our clinic following extensive resections have been poorest with regard to rapid local and general recurrence, morbidity and mortality when in our opinion the foregoing criteria have been innocently overlooked or wilfully ignored. In the proper management of lump in the breast we regard thoroughness in attempted pre-biopsy clinical classification as second in importance only to early exact microscopic diagnosis by surgical biopsy. We have noted excellent although necessarily temporary improvement, (in patients whose disease was considered incurable), to follow x-ray and/or steroid therapy, or limited surgery (simple mastectomy) alone or in combination with one or both the former. However, when findings originally considered to contra-indicate extensive resection have changed or disappeared following these palliative efforts we have found the apparent changes in "curability" to be completely illusory.

We have used androgens for bony metastases in patients of all ages, and continued the treatments in some cases longer than two years. Estrogens have been used only for soft parts recurrences or metastases in women more than five years past the menopause. Our results, generally satisfactory, will be reported in later publications; at present we consider the steroids useful for palliation in advanced carcinoma of the breast.

Summary and Conslusions; Lump in the breast is recognized as suspicious by a larger portion of the public than recognizes the significance of any other cancer symptom. We have found the complaint of lump to be at least as significant for carcinoma of the breast as is the palpation of lump. Our group pre-biopsy differential diagnosis of lump has been too poor to justify delay in securing microscopic diagnosis by surgical biopsy. Knowledge of the demonstrable or predictable extent of the malignant disease should be available at the time biopsy is done if intelligent choice is to be made between extensive or limited surgical excision. Hence the use of the radical operation in expectation of long disease-free survival requires critical physicial and philosophic evaluation of prospective curability in each case of carcinoma of the breast. It is noted that the average physician, collectively responsible for diagnosis and treatment of a majority of the cases of carcinoma of the breast, has limited opportunity for retrospective analysis of his individual results with this disease. More frequent instruction of patients by physicians in the method and periodicity of self-examination of the breasts can improve results through earlier detection and diagnosis of lump.

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Results that are Obtained in Mass X-Ray Survey

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The aim of the medical profession is the ultimate eradication of tuberculosis. The accomplishment of this aim is beset with a great number of difficulties. However, it is agreed that to accomplish this purpose we must have efficient performance of the following procedure.

First, case-finding — that is the discovery of the case in its earliest stages.

Second, facilities for the medical treatment of the case, i.e. sufficient number of beds for care of patients.

Third, rehabilitation of the patient, which should start as soon as a diagnosis is made, then in period of active medical treatment and then through period of post, active medical treatment.

Fourthly, the maintenance of the patient's family until the bread winner can work again.

In this report we are primarily concerned in the first part, namely, that of case-finding. With the older methods of case findings where we waited until the patient had enough complaints to present himself to the doctor, our results were rather disappointing. We found about 80% of the cases in the far advanced cases; 16% in the moderately advanced cases and only 4% in the minimal cases. This proportion of the stage of the disease did not vary greatly, no matter how well informed the public or the medical profession became.

The reason for these disappointing results was in the nature of tuberculosis itself. Early cases do not have signs or symptoms. The need for the finding of the early case is noted when we consider that 95% of the minimal cases can be permanently controlled. Also from the public health standpoint, we have a great asset. The minimal case, as a rule does not transmit the disease to another person. So it can easily be seen that should we discover the great majority of cases in minimal stage there would be a marked reduction in the future cases of tuberculosis.

The advent of the miniature chest x-ray has given us a relatively cheaper method of group or mass x-ray. Under this method we hope to find tuberculosis in greater proportion in the minimal stages.

We wish to report such a community survey, the results and the interpretation of the results.

The mass x-ray survey is difficult, demanding specialization of group of workers and concentrated effort so that a universal x-ray of the community is obtained. After all this is done, what are the results? How many cases of unsuspected tuberculosis are found, in what stages are they, are they active or arrested, progressive or static? What age group will have the greater percentage of active cases, of arrested cases? This we will be able to show at this meeting but the ultimate story can not be told unless we have follow up of all suspect cases found in the survey for at least five to ten years.

The follow up of the diagnosed case, whether it is active or arrested, is of supreme importance. All resources of the community, therefore, are coordinated in the one common effort of bringing the patient suspected of having tuberculosis in contact with his family physician, or if this fails, with the public chest clinic.

Many authors have emphasized the difficulties present in attempting to differentiate the minimal lesion that will remain stable from the infiltration that develops progressive disease. Laboratory findings have been of little help in evaluating the prognosis of these cases.

The decision as to the type of treatment in the asymptomatic case, with negative sputum, only minimal x-ray findings being present, has been especially difficult. Mistakes in supervision vary. Needless removal of persons from the jobs and homes created serious economic and social

problems. Lax methods of letting the case progress until actual symptoms and positive sputum is defeating the purpose of the x-ray survey. The correct treatment of these cases takes the knowledge and experience of doctors who are especially trained in handling chest diseases.

I will now demonstrate to you in the following tables the results of our x-ray survey of Maywood-Melrose Park.

In Table 1 we note that in 14,998 x-rays only 1.5% or 236 show suspect pathology for tuberculosis. The possibility of finding other pathology is noted when we observe 490 or 3.3% of other pathology is found. This group is made

MAYWOOD-MELROSE PARK
COMMUNITY X-RAY SURVEY
TABLE 1

Total X-rayed	14,998	
Essentially Negative	13,872	92.5 %
Suspect Tuberculosis	236	1.5 %
1 Suspect Tuberculosis	227	1.42%
2 Suspect Active Primary	9	.08%
Suspect Non TB Pathology	490	3.5 %
Unsatisfactory Films	400	2.70%

up of cardiac defects, bronchitis, bronchiectasis, tumor suspects, etc.

In Table 2 we take 236 suspect cases of tuberculosis and follow them up with a 14 x 17 x-ray of the chest. 39 cases did not return for follow x-ray no matter how many requests were made. Nine cases of failure to follow them is noted in the sub heading.

TABLE 2

Suspect Tuberculosis	236
Re-X-Ray by 14x17	195
Unable to X-ray	39
A. Died — Cardiac	1
B. Unable to Locate	5
C. Refused Re-X-ray	14
D. Resides Outside Community (No Report Available)	19
No Report from Private Doctor	4

In Table 3 the 195 cases after examination by 14 x 17 and sputum test, and physical examination we were able to find 114 cases which were definitely reinfection type of tuberculosis. On the follow up 69 proved to be negative. This indicates the pathology found on the miniature x-ray should only be considered as suspicious, and no final diagnosis be made unless a follow-up x-ray be done.

TABLE 3

Suspect Tuberculosis Re-X-ray 14x17	195	
Negative	69	
Primary-Active	4	
Reinfection TBC	114	
Non Pulmonary TBC Pathology	7	
1. Pulmonary		2
2. Cardiac		1
3. Other		4
Unsatisfactory	1	

In Table 4 we further break down our suspect cases in the percentage as to stage of pathology. 81.9% are considered minimal stage, 17.2% moderately advanced and only 0.9% in the far advanced case. This percentage is a great improvement in the type of case found when we wait for signs and symptoms. The determination of activity from an x-ray is rather hazardous at the best. It is doubly so in the miniature x-ray.

TABLE 4

Suspect Reinfection TB	227	100.00
Minimal	186	81.9
Moderately Advanced	39	17.2
Far Advanced	2	0.9
Active Total	104	
Minimal-Active	86	82.7
Moderately Advanced Active	17	16.3
Far Advanced Active	1	.10
Arrested Total	123	
Minimal-Arrested	100	81.3
Moderately Advanced Arrested	22	17.9
Far Advanced Arrested	1	.08

In Table 5 we note the percentage as to stage on the follow-up x-ray. It is to be noted that the 69 cases that were negative on the re-x-ray were from the minimal group and therefore our percentage of minimal cases drop from 81.9% to 54.5%. Also the possibility of determining stage of activity or arrest increases when a clinical examination is performed.

In Table 6 it is noted that in the entire survey of almost 15,000 x-rays only 12 active cases of tuberculosis was found and of these 6 were previously known to the health authorities. The disposition of these cases indicate that patients will do what is expected of them if convinced of their pathology.

TABLE 5

		per cent
Reinfection Tuberculosis	114	
Minimal	62	54.5
Moderate Adv. Pulmonary TB	36	31.6
Far Advanced	4	3.5
Suspect	12	10.4
Active Total	12	
Minimal-Active	4	33.3
Moderately Advanced-Active	7	58.4
Far Advanced	1	8.4
Arrested Total	90	
Minimal Arrested	58	64.5
Moderately	28	31.1
Far Advanced	4	4.4
Suspect	12	

TABLE 6

REINFECTION TUBERCULOSIS ACTIVE

Sex	Male	6	Female	6
Race	White	9	Colored	3
Age	Under 15	1	Over 15	10
Stage	Minimal	4	Mod. Adv.	7
			Adv.	1
Previous Knowledge	Known	6	Unknown	6
Disposition	Admitted to Tuberculosis Sanitarium			4
	Under Care of Pvt. Doctor			4
	Under Clinic Care			3
	Home Care			1

In Table 7 we noted that the active cases are mostly found in age group of 15 years to 29 years. The arrested cases are noted in 29 years to 60. Surprising amount of pathology is found in people over 60 years of age.

In summary, it can be said

1. That the yield of active cases from such a survey is rather small but nevertheless profitable. That most of the cases in this group are under medical treatment. Also that they are under control and the spreading of tuberculosis is controlled.

2. That the active cases as a general rule are found in the younger age group and that most of the arrested cases are found in age group of 34 and up.

From this we can presume that many people have tuberculosis of the reinfection type without knowing about it. They control their infection without knowing anything about it. That these infections are of limited size because of the great percentage who have only a minimal amount of pathology.

3. That greater number of cases are found in the arrested stage. The follow up of this group for a period of about five years should give us an index of what happens to the so-called innocent type of lesions. I believe that close observation of this group is essential and by doing this we will greatly enhance the value of the mass x-ray procedure.

TABLE 7

14x17 SURVEY X-RAY TB PATHOLOGY

Activity Stage	Under 15 yrs	From 15-29	From 29-60	Over 60
Activity Total	0	8	3	1
Minimal	0	3	2	0
Moderate Adv.	0	5	1	0
Far Advanced	0	0	0	1
Inactive Total	1	9	65	15
Moderate Adv.	0	1	20	3
Far Advanced	0	0	5	4
Suspect Total	0	3	8	0
Minimal	0	3	8	0
Moderate Adv.	0	0	0	0
Far Advanced	0	0	0	0

4. The breakdown in age groups clearly demonstrates that a great deal of tuberculosis is found in the older groups. That this disease will become active, under adverse living conditions, is clearly demonstrated when we examine our sanatorium population and note the number of active advanced cases found.

5. We have not tabulated the nontuberculosis pathology found in this survey because we wished to limit ourselves to the tuberculosis problem. However, a great number of nontuberculosis cases have been found and these are reported to their private physician for medical care.

Equatorial Africa — Six Months of Adventure

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Dr. Samter: Only beginning and end of today's Seminar is a travelogue. It is true that Dr. Birch left for an ocean voyage on the M.S. Triton last June shortly after the AMA convention. It is true that she marveled at the full moon reflected in tropical waters, flying fish, dolphins, Portuguese men-of-war, sharks and spouting whales. Beyond this, however, is a fascinating tale of the strange land, only a few hours of flight from our own. Dr. Birch has looked upon Equatorial Africa with many eyes — the eyes of a scientist, the eyes of the American used to modern technology, the eyes of a woman, and the eyes of a poet.

Dr. Birch: Our first port was Dakar. The wharf was like a picture out of the National Geographic Magazine. There were Africans in all stages of apparel from loin cloth to complete European dress. Some wore only dirty, torn rags. Many Mohammedans added picturesqueness to the scene with their long flowing robes of white and blue and turbans on their heads. Government harbour officials in white uniforms and brass buttons added a degree of dignity. The wharf scarely afforded standing room it was so crowded. The word "Dakar" comes from two old French words which mean "port of slaves." Just off the coast is the Island of Caree. Here the slaves were held until they boarded ships for America. Slaves houses with dungeons and chains still stand on the island as grim reminders of a black past. To this day in many parts of Africa "going west" the direction of the slave trades means "to die" and after death bodies are buried in a sitting position facing east.

We made stops of two to four days at a number of ports including Freetown, Monrovia, Port Palmas, Conakry, Takoradi and Lagos. There was time to visit hospitals such as the Firestone Hospital at Port Palmas and the Rockefeller Yellow Fever Center at Lagos.

Next was my port of debarkation, Douala, port for the French Camerouns. I spent the next two months in Bululand at the Presbyterian Mission at Elat. The hospital here is the best for miles, yet it differs greatly from ours. There are electric lights in the operating room but the wards are without artificial light except for the occasional lantern owned by a patient. There is no running water and no diet kitchen. Each patient brings one or more persons to cook for him and otherwise provide for his needs. A shed serves as a community kitchen where food is prepared and cooked over wood fires. If the patient is a headman, the entire village may come to the hospital with him. Diagnoses are made chiefly by employing the five senses of the examiner. Laboratory work is minimal. It is gratifying to realize how much can be done without extensive laboratory work.

Patients in the 225 bed hospital and the dispensary present many of the conditions of the temperate zone plus most of the tropical diseases, leprosy, schistosomiasis, Loa loa infection and other filarial worms, many of the intestinal worms, yaws and other bacterial infections. Pulmonary tuberculosis is virulent. The degenerative diseases are few and mild such as diabetes and visceral carcinoma. This is partly explained by the scarcity of older people and partly by the tropical climate. The warm, year round tem-

perature lowers the physiological indices. Blood pressure and basal metabolism are low; pulse rate is slow; vital capacity is about half that of the temperate zone.

I visited several other Presbyterian mission hospitals in the Camerouns including Bafia where the government has a hospital for African Sleeping Sickness. This was my first experience with this tropical disease which is limited to the continent of Africa. African Sleeping Sickness is transmitted by the Tsetse fly and is found only in those regions where the fly breeds. These are known as fly belts. The patients were in all stages of the disease.

In Africa I met a charming missionary nurse. We joined forces and in her car we drove over 7,000 miles across Equatorial Africa. This is said to be the most unhealthy region of the world. It is sometimes called the "white man's grave." Africa is said to kill her lovers, her friends and her invaders. In this part of the world you protect yourself by limiting and inhibiting your own actions, you do not modify the attacker. The traveller can be immunized against small pox, typhoid, yellow fever, typhus, cholera and tetanus. There is little or no immunity against the protozoal and helminthic disease. Our car was screened, we carried D.D.T. and insect repellents and dressed to protect against mosquito and fly bites.

We entered the Belgian Congo at Libenge. Most of our nights were spent at missions where the food and water are safe. In fact, the missions are islands of religion, sanitation, beauty and education. It would be well nigh impossible to travel in Equatorial Africa without the aid of the missions. Stops were made at numerous mission and government hospitals. We crossed the Equator several times and drove through the beautiful Ruwenzori Mountains. Our car was piled high with food and equipment but we carried no guns and had no guides.

On a safari into the jungle to visit the pygmy villages we employed local guides. The pygmies are very primitive, live in tiny poorly constructed houses and wear nothing but loin cloths. They occupy the lowest rung on the human ladder of life.

Our easterly destination was Entebbe, one of the British Tsetse fly control stations on Lake Victoria. Enroute we stopped at two large cities, Stanleyville and Kampala where we stayed in

modern hotels. We returned by a more northerly route crossing the Victoria and Albert Nile Rivers.

Infant mortality is high in this region, it averages about 50%. In some places infants are given no food for six days after birth. All deformed babies and multiple births are put in the bush to die. The patient's complaints are a weird assortment of witches and worms, evil eyes and curses. Along the roads many wear charms to prevent leprosy, small pox and attacks by crocodiles and gorillas.

One of the mission doctors introduced me to a real medicine man from whom I procured two of his masks. His armamentarium consists of skulls of monkeys, cats and horses, baskets of assorted jaw bones, bird claws, feathers, porcupine quills, dried lizzards, frogs and snakes, skins and horns of animals. Each of these or a combination of several will protect against demons or cure pain. Medicine men rarely treat disease itself but they appease the spirit of disease. In other words, they have their herbs and some of them are good but real cure as they see it comes from the spirit world. They are specialists in magic.

We returned to Douala and waited several

days for the boat to bring me home. It was a wonderful trip. When I think of it now it has the peculiar fabric of a dream. During the day, while I work soberly on routine chores, I find myself thinking of slim, black and well greased bodies, ornaments on arms, legs, nose and lips, the inspirational singing of the leper choir, the call of the drums at night, the palaver house, the camp fire, the smell of dried fish, the many uses for banana leaves, the swishing of grass bustles, the skinning of the spotted leopard at Bafia, ballet skirts of leaves and ferns, pot bellies full of malarial spleens, the regal elegance and classic beauty of tatoo and beads.

My thoughts are a mingled mass of merriment and murder, shadow and superstition, pain and the primitive, squalor and splendor, dirt and dignity, bravery and barbarism, grace and grime, spirits and smells, lice and lepers, humor and hookworm, mosquito nets of numerous designs and baths of many sorts.

(Editorial Note) Dr. Birch's Seminar was illustrated by a large number of beautiful lantern slides in color. The prohibitive cost of reproduction makes it impossible to include illustrations in the Seminar. We thought, however, that the photograph of a map which she used during her travels might add to the enjoyment of her presentation.

Strange Ways in Which the Allergic Mechanism is Altered

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Allergic disorders are sometimes favorably influenced by other conditions, which may by themselves be deleterious to the general health of the patient. For example, Dr. P. Hench of the Mayo Clinic reported a number of cases in which Hepatic Trauma associated with Jaundice alleviated Rheumatoid arthritis. I have had similar experience with cases of Hay Fever and Bronchial Asthma. The patients were symptom free during the period of jaundice. These are clinical reports, but unfortunately there has not been enough attention paid to these evaluations: merely because no ready explanation is forthcoming from the experimental laboratories.

These clinical observations lead us to the following questions:

1. What do these observations mean?
2. What can they teach us in the management of allergic or other diseases?
3. How are these disturbances related?

With this in mind, I am suggesting a hypothesis for the allergic phenomena derived from and based upon clinical evidence, which is as follows. Allergy-prone individuals are a definite pattern of mankind. They are born with a constitution that is inadequate. The nervous system is the most offended tissue and may be responsible for the allergic reaction. The tissues are readily influenced by internal or external environment. Repeated and prolonged irritation by specific factors such as proteins, emotions, atmospheric disturbances, etc. will provoke changes in the internal environment which the inadequate constitution cannot correct. These changes are characterized by an inbalance in tissue function due to a biochemical disturbance resulting in an abnormal reaction. If the irritability is mild, it will result in minor symptoms. If the irritability is greater and prolonged, it will produce major symptoms. If the irritation is severe and constant, the patient will develop severe and dangerous symptoms, which frequently cannot be controlled with any form of therapy. However, if the irritation can be removed or, for some unknown reason ceases to be effective, the tissues become stabilized and the patient becomes symptom free.

A careful study of the patient as a whole is most important, including his personality, behavior and emotional life, and is at times of greater value than laboratory procedures. I wish to make it clear that I am not underesti-

mating the value of skin tests: they are, perhaps, of no lesser value than E.K.G.'s in heart disease. They are equally good servants but poor masters. Skin tests sometimes indicate whether or not an allergic condition exists in the skin, but they do not always indicate that a similar condition exists in other tissues or organs, and almost as frequently the skin will fail to react to a specific irritant yet the patient will develop allergic symptoms when exposed to it. There are no allergens available for testing when we deal with an emotional disturbance or a psychological block to any particular environmental factor, yet we know it to be a fact that any one of them may bring on an attack of asthma or a severe case of urticaria. Many of the problems arising in allergy are not well explained on the basis of existing theories or present-day knowledge, but clinical and investigative observations have fortified my belief that allergy is a constitutional inadequacy. To illustrate my hypothesis, I am presenting clinical evidence as observed in the study of our patients, and for the purpose of clarity I have separated these cases into various groups with comments on each.

NEURO-HUMORAL FACTORS

Case No. 1—A male patient, age 38, with a history of hay fever for the past fifteen years was well controlled with pollen therapy. In August, 1945 he developed symptoms of hay fever complicated by bronchial asthma. He complained of being tired, drowsy, and of having constant headaches. His symptoms became progressively worse until he finally became comatose. All available tests and laboratory findings were essentially negative, with the exception of increased pressure in the cerebro spinal fluid. He slowly regained consciousness and became symptom free. On several occasions following this upset he has been thoroughly examined by competent neurologists for any evidence that could have determined the reason for his loss of consciousness, and the only possible explanation offered was that the patient developed a cerebral edema due to pollen toxicity.

Case No. 2—Male patient, age 44, who has had hay fever and migraine headaches for a period of twenty years. He was not able to tolerate pollen therapy in the weakest dilution without developing systemic reactions. He therefore spent the hay fever seasons in the far north with fairly good results, although not completely free of symptoms. In 1946 he remained at home, and with the aid of antihistaminic drugs was fairly free of hay fever, but there was no effect on his migraine. In April, 1947 he developed jaundice from a carcinoma of the liver, which became progressively worse. During the months of August and September he was completely free from hay fever or migraine headaches, although on skin tests at this particular time he gave a four plus reaction to ragweed. For experimental purposes he was given 2,000 units of ragweed pollen intramuscularly without developing any systemic reactions. The patient died as a result of the carcinoma of the liver.

An interesting observation in the first case is the sudden loss of consciousness. This occurred after several days of exposure to ragweed pollen with typical symptoms of hay fever complicated by bronchial asthma. Upon skin tests the patient gave positive reaction to ragweed pollen indicating that he was constitutionally a hypersensitive individual. The possibilities of intracranial disease or systemic infections were ruled out by physical and laboratory procedures, but apparently the removal of spinal fluid, relieving intracranial pressure, resulted in immediate recovery. His medication prior to lumbar puncture consisted of epinephrine by injection, and dextrose and aminophyllin intravenously at frequent intervals, which gave only partial and temporary relief.

The second case is of greater interest and an incentive for further investigations which could lead to a new concept in the field of allergy. His hay fever symptoms were definitely due to ragweed, which was substantiated by skin tests. His migrainous headaches which occurred at periodic intervals were probably due to some irritation of the nervous system. When the patient developed jaundice, he was free from hay fever and also from migrainous headaches. From these observations one may assume that jaundice could invoke an anti-allergic status and control hay fever symptoms, but his migrainous headaches, which had no allergic basis, were also controlled. This led me to believe that the nervous system was an influential factor in both conditions. But if the unknown factor in jaundice was influential in controlling his migraine, the trigger mechanism for the allergic reaction would also be in the nervous system, as it likewise controlled his hay fever.

INFANTILE ECZEMA

The relation of infantile eczema to allergic factors is often obscure. The mechanism producing it does not appear at hand, nor is the hope for therapy very encouraging. The theory of over-exposure is not satisfactory, and we are not able to reproduce it experimentally. Our observations are that most of the spells will clear up before the age of three without therapy, although their exposure to the same irritants is

not interrupted. Although their skin is dormant their allergy is only in a state of quiescence, which is proved by the fact that most of them will develop some other form of allergy in their later years. In view of the fact that asthma is frequently preceded by infantile eczema, we may be justified in concluding that they are of a similar pattern and could have a similar etiological factor, but from a therapeutic standpoint they are not the same and differ in their responses.

A case of interest is that of a woman patient, age 29, with a history of infantile eczema which began at the age of six months and cleared at the age of 3 years without therapy. At the age of 19 she developed a generalized dermatitis. Medical management for a period of 2 years failed to improve her condition. She became pregnant and her dermatitis immediately began to improve and cleared before delivery. Two weeks post-partum her dermatitis recurred and remained for a period of two years with no response to any form of therapy. She again became pregnant and her dermatitis again cleared completely, only to recur two weeks following her second delivery and then remained for a period of seven years without any relief. She became pregnant for the third time and her dermatitis again cleared up, only to recur five days following her last delivery but with greater severity than at any previous time. She gave positive skin tests to ragweed pollen and house dust with no exacerbation of symptoms during the pollen season. The children born to this patient are of clinical signficance. The oldest child, a female, developed infantile eczema two weeks following birth: the skin cleared at the age of three years without therapy. The second child, a male, did not develop any eczema or any other form of allergy as of this date. The last child born, a female, developed eczema five days following birth.

A similar case which is being studied at present is that of a woman, age 22, with atopic dermatitis since infancy which has not responded to any form of therapy. Eight months ago she became pregnant and her eczema cleared completely. We await with interest the outcome of her eczema and that of the chi'l to be born.

These observations are of interest and clinical significance. These patients did not respond to any type of management but on three different occasions in the first case and on one occasion in the second case they cleared with pregnancies. If the theory is sound that a mother who has been sensitized to some foreign protein will sensitize the foetus through the blood stream, what has prevented the male child from becoming sensitive but not the females? If the theory is logical and scientific that the foetus becomes sensitized by the mother, could the unknown factor desensitize the mother during the same period? What is the unknown factor, if such exists, that is lost with termination of pregnancy? From the above clinical evidence, it would appear that the child is born with a constitution that is inadequate, and when it comes in contact with an irritating environment it will develop atopic eczema. Therefore, it is logical to assume that the foetus in utero is responsible for a biochemical change in the tissues which desensitizes the mother. Most children with atopic eczema will recover from it before the age of three with or without therapy, although their exposure to the same irritants is not interrupted. Therefore, the theory of over-exposure is not the principal factor in allergy. Although the consensus of opinion is that removal of the offending substances will result in recovery, this is only partially true. The facts are that their tendency to eczema becomes dormant for a time, which may be due to a biochemical change that occurs during the period of growth, only to take on a different form of sensitivity at a later date, such as bronchial asthma. This is certainly not a chance occurrence because it prevails in more than half of our cases.

BRONCHIAL ASTHMA

Bronchial asthma has been a source of grief to the medical profession. It has attracted many of our master clinicians who have vigorously labored to find a solution, but up to the present they have not been successful. The application of skin tests, ophthalmic reactions, patch tests and passive transfers has in general proved very disappointing. Numerous ideas and theories have been so readily accepted as facts and so many unjustified claims have been made regarding benefits derived from such practice that the management of such allergic individuals has been very confusing.

A female patient, age 34, had bronchial asthma for a period of ten years. A careful history revealed that her attacks were not related to foods, environment or season. All laboratory findings, including X-ray of the chest and gastrointestinal tract, were essentially negative. Skin tests to all allergens, with the exception of house dust, were also negative. The patient was a very nervous type, complaining of headaches, gastrointestinal disturbances and fatigue. She had a neurodermatitis for a number of years which did not respond to any therapy. She was placed in a dust-free environment and treated with dust extracts and mild sedatives when indicated. She responded fairly well for a number of months when suddenly, and for no apparent reason,

she became progressively worse and for several months did not respond to any therapy. She journeyed to a doctor in the south and with the aid of drugs only she was fairly free from her attacks for several months, but then these recurred with greater severity than at any previous time. Her nervousness became uncontrollable and within a period of a year she became insane and was committed to an institution. An interesting observation of this case is that while in this mental state she was completely free from asthma.

The second case is that of a female, age 34, weighing 104 lbs. with a history of bronchial asthma for the past two years. Her attacks were worse in August and September. The only relief obtained was from the use of epinephrine. Skin tests gave positive reactions to ragweed and dust, although a careful history failed to uncover any definite symptoms of hay fever. In order to give the patient the benefit of doubt, she was treated with pollen and dust and epinephrine when indicated. She began to improve and was fairly free from asthma for four months. In 1943 her husband was inducted into the Navy. She immediately developed severe attacks of asthma with no response to any medication. She was hospitalized and her condition became progressively worse and serious. Upon request, her husband was released from the Service. She began to improve, although her medical management was not altered. They moved to Arizona and remained there for a period of ten months, and although under constant medical care she failed to show further improvement. The patient then returned home and was placed on a regime similar to that employed prior to her departure for Arizona. She began to improve, and for period of two months was in fairly good health, although she had to rely upon epinephrine inhalations at frequent intervals. About this time the War ended: the patient began to show rapid improvement, and all medications were discontinued. She gained weight and has been free from asthma for a period of one year.

From the history of the first case we note that the patient's attacks were not related to any specific factors. Skin tests were all negative, except to house dust, for which she was treated with some improvement for only a short period. For no obvious reasons her attacks recurred with greater severity. A change of physicians and management was responsible for a temporary improvement. Apparently specific or non-specific therapy was of no benefit to this patient, but a change of environment and a change of doctors had a psychological effect, stabilizing her nervous system and creating a dormant situation, but when the condition became irreversible she became mentally unbalanced but also asthma free.

Our second case is of a similar nature. This patient also responded to specific therapy for only a short period. A change to a different environment and a change of management did not benefit this patient, but a change of circumstances, which gave her security, did stabilize her nervous system and she became asthma free. The length of time this patient will remain free from asthma remains to be seen.

THE PSYCHOSOMATIC AND PSYCHONEUROTIC FACTORS

The psychosomatic and psychoneurotic factors do, without a doubt, influence the allergic patient. Comparing the psychoneurotic and the allergic phenomenastimuli and reaction — we find as a cause something that is relatively harmless to normal individuals. The salient point to psychroneurosis as an allergy is that we are dealing with a particularly reactive and sensitive individual, with reactions in organs or tissues by which nature seeks an outlet. There are relations of the allergic to the psychoneurotic as shown, for example, by the fact that hay fever, in a case of rose pollen sensitivity, was produced by the sight of a dust cloud on a movie screen, or an asthamtic attack precipitated by an emotional upset. We are made to believe that the allergic reactions are due to an antigen antibody reaction, but can this theory be applied to the emotions? It is a fact that shock or emotion will produce change in the internal arrangement of the nervous system, for example, insulin shock. The following case reports indicate that emotions or shock will precipitate an asthmatic attack in some and abate it in others.

A male patient, age 29, had a history of bronchial asthma for the past five years. His attacks were aggravated in the fall. Physical and laboratory findings were essentially negative. Skin tests gave positive reactions to ragweed, grasses and dust. He was well controlled for a period of two years. In the fall of 1947, while at work, a tree close by suddenly broke and fell in his direction. He became frightened and could not move away to protect himself. He began to wheeze and developed severe asthma which lasted three days, requiring the use of epinephrine and sedatives.

Another case is that of a male patient, age 35, with a history of bronchial asthma for the past ten years. Laboratory and X-ray findings were essentially negative. Skin tests to allergens were negative. He was managed symptomatically with no relief. He tried every form of therapy that was ever prescribed or advertized, without much benefit. The only partial relief he obtained was from the use of epinephrine. Several weeks ago he was in an automobile accident, injuring his knees, legs and back, with a few small lacerations on his face. For a period of two weeks he was completely free from asthma but when he recovered from his injuries his asthma recurred.

DISCUSSION

The two cases of bronchial asthma I have described are interesting and instructive. The first case gave specific reactions to ragweed, grasses and dust and with specific management he was well controlled. Sudden shock to his nervous system precipitated an asthmatic attack, and only when his nervous system was stabilized, mostly by rest and sedatives, did his asthma abate. He has been free ever since.

On the other hand, the second case gave no reactions to any allergens and therefore specific therapy could not be applied and all other forms of therapy had been tried without success, but sudden shock to his nervous system gave him complete relief which lasted two weeks and when he recovered from his shock his asthma recurred. Modern physiologists tell us that fright will increase the output of epinephrine and, therefore, should relieve the asthmatic attack. How can we apply the same theory to our first case, which precipitated his asthmatic episode? However, we must admit that the nervous system was the influential factor in both cases. Therefore, the only logical explanation is that shock could produce a chemical change in the nervous system, resulting in a hyper-activity and precipitating the asthmatic attack, or shock could result in a hypo-activity and therefore abate the attack.

Hypnosis has been used by many with success in a great number of cases. Psychotherapy, which is practised, wittingly or not, by most modern allergists, has claimed success when all methods have failed. All of this is in sharp contrast to our present data and knowledge pertaining to antigens and antibodies, which has not offered a satisfactory explanation nor has it been practical in its application. There are a great number of patients with syndromes of eczema, asthma or urticaria, in whom demonstrations of immunologic allergy are different and frequently impossible.

A paper was recently published describing a very interesting experiment by Dr. Hans Selye and his team of biologists at the University of Montreal, in which animals were subjected to sub-lethal stress with the same agents for several weeks instead of a few days. During the first few days the organisms responded with the usual alarm reaction and showed the typical organic and chemical changes: growth and sex changes ceased and all signs of an intense tissue breakdown were present. As the stress continued unabated, the animals that survived the alarm reaction began to recover. The adrenals started to refill their empty stores with lipid and reverted to normal size. Dr. Selye also maintains that the adrenals do not act independently, like other endocrine glands, but are under the command of the anterior portion of the pituitary gland, and irritation of that gland may disturb normal function of all tissues or organs. If humans were subjected to these experiments, our findings would most likely be similar.

In recent years the realization that histamine is partially responsible for the allergic reaction has led to the development of antihistaminic drugs. In experimental and clinical trials they were found to be effective in many cases of hay fever, urticaria and other allergic conditions, but were of little appreciable benefit in the asthmatic or many other allergic conditions. Their action is not well understood, with the exception that they have a definite effect on the nervous system which has been observed by the following side reactions — sedation, dizziness, weakness, restlessness, difficulty in coordination, nervousness and, infrequently, numbness of the upper or lower extremities. Their action is also that of a potent local anesthetic. From the above statement, we are justified in concluding that in controlling many of our allergic diseases we are primarily influencing the nervous system. This is emphasized by the sedation that occurs with most of the antihistaminic drugs.

Up to the present time medical science has not succeeded in giving us a satisfactory understanding of the problem of allergy. I have, therefore, offered a hypothesis which is based on synthesis and analysis as I have applied them to my clinical observations in many years of practice. I maintain that allergic individuals who are born with a constitutional inadequacy and an abnormal nervous system which, when influenced by specific irritants, shock or emotion, will result in a biochemical disturbance of the neuro-humoral system and will produce a hyper- or hypo-activity and precipitate the allergic reaction or terminate its effects. I do not claim to have exhausted the subject or to have done away with the necessity of other ways of studying the problem. I also do not advocate the abolishment of our present methods of treatment unless and until we find better ways and means of therapy.

If research in the field of allergy will include the study of disturbances of the neuro-humoral system and methods of control, it may bring about a new hope in the treatment of allergic diseases.

Professor J. F. Brock, M.D., F.R.C.P. of England, in a presidential address to the Cape Town Medical Society in 1946, made the following statement: "Those who approach the allergic disorders from the point of view of agents such as protein or bacterial sensitivity will never be able to understand or treat them adequately. These disorders can only be understood when we think in terms of constitution, and it is very likely that inadequecy plays a part in their genesis."

CONCLUSIONS

Case histories are presented in an attempt to offer an explanation of allergic reaction in certain individuals. From the clinical evidence presented, we are justified in concluding that allergic individuals are a distinct pattern of life and are born with a constitutional inadequacy which is not able to correct itself under all circumstances. When these individuals are exposed to certain irritants a biochemical disturbance takes place in the neuro-humoral system, producing a hyper-activity resulting in the allergic phenomena.

These conclusions are based upon the following findings:

1) Laboratory procedures and skin tests were unreliable in establishing the etiology in most of our cases.
2) Shock or emotions were influential factors in precipitating the allergic reaction in some or abating it in others.
3) Removal of spinal fluid, thus relieving cerebral spinal pressure, terminated cerebral edema and bronchial asthma.
4) Sedatives influencing the nervous system were necessary to control allergic symptoms.
5) The beneficial effects of hypnosis and psychotherapy in controlling allergic symptoms cannot be disputed by anyone.
6) Atmospheric disturbances and its influence on allergic individuals is a known fact. The behavior of which is most likely an emotional instability.
7) The influence of the sympathetics and parasympathetics on the allergic response is a physiological fact.

Since this article was written I have been experimenting with adrenal cortical hormone in allergic diseases. Observations of its effects are of profound interest and coincide with the hypothesis of this article. Findings will be published at a later date.

USE AUREOMYCIN AGAINST INFLUENZAL MENINGITIS

Favorable results from treating seven patients for influenzal meningitis with aureomycin are reported by a group of doctors from the University of Maryland School of Medicine, Baltimore.

The disease is an infection of the membranes which envelop the brain and spinal cord and is not caused by the microbe responsible for ordinary influenza.

"Aureomycin therapy was followed by fall of temperature to normal levels within 96 hours after the initial dose," Drs. Miles E. Drake, J. Edmund Bradley, Jerome Imburg, Fred R. McCrumb Jr. and Theodore E. Woodward write in the February 18 Journal of the American Medical Association.

"On the third day of treatment, abatement of such symptoms as mental dullness and convulsions was definite," the doctors say. "On the fifth day, the acute phase of illness had completely disappeared. The patients were plainly convalescent, with increased strength and return of appetite."

Former treatments for the disease, including administration of sulfa drugs and streptomycin, possess "clearly defined disadvantages," the doctors point out, adding:

"Clinical trial of aureomycin in these cases has led us to believe that it may represent a highly effective method of therapy in this type of infection."

Hip Disorders in Children

A Differential Diagnosis

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Early recognition is of paramount importance in the successful management of most hip disorders in children. This fact has frequently been stressed in the writings of orthopaedic surgeons throughout the world. And yet how often today are children found walking at the age of two or three years with previously unrecognized congenital dislocated or subluxated hips! And how many dislocations result from lack of diagnosis and early treatment of pyogenic arthritis in the hips of infants! A slipping capital femoral epiphysis has frequently been overlooked at a time when it could easily be treated with a good result, simply because referred pain in the knee distracted the physician's attention from the hip. These, and many other undesirable conditions might be avoided by more accurate observations on the part of those who see children with hip disorders in the early stages.

The hip disorders most commonly seen in children may be divided into three groups according to their etiological classification as follows:

I. Congenital
  A. Dysplasia
    1. Subluxation
    2. Dislocation
  B. Coxa Vara
II. Infections
  A. Transient Synovitis
  B. Septic Arthritis
  C. Tuberculosis
III. Developmental
  A. Coxa Plana (Legg-Perthes' Disease)
  B. Epiphyseolysis
  C. Bone Tumors
    1. Benign
      a. Osteochondroma
      b. Osteoid osteoma
      c. Fibrous dysplasia
      d. Eosinophilic Granuloma
    2. Malignant
      a. Osteogenic Sarcoma
      b. Ewing tumor

Hip Dysplasia.—While the term "dysplasia of hips" has long appeared in foreign literature, it is only recently that it has been generally accepted by American writers. It denotes a flat, shallow acetabulum which has formed during embryonic or fetal life. The articular surface of the head of the femur may lie entirely within such a socket, or only partially (subluxation) or not at all (luxation or dislocation). Since there are no subjective or objective signs associated with the first condition it can be detected only in the event that an x-ray is taken for some other reasons, e.g. clinical evidence of a dislocation in the opposite hip.

On the other hand, a dislocation may be recognized quite readily, even in the infant who has not yet started to stand up. This can be accomplished during infancy, however, only by careful physical examinations. The hips should be examined not only at birth but also a few months later. In unilateral dislocation it may be noticeable that the affected hip is more prominent than the opposite one and that the leg is shorter. This may be demonstrated by having the infant lying on his back and flexing the thighs and the knees so that the soles of the feet are flat on the table. The knee of the affected side will be lower than the opposite one. Limitation of abduction can be noted quite readily. By alternately pushing and pulling on the leg a "piston" motion, or telescoping of the femoral head, may often be demonstrated. Asymmetric skin folds are usually observed.

Bilateral dislocations may not be so noticeable in the infant, since there will be no asymmetry of skin folds and leg lengths, nor prominence of the hips. However, a careful examination will reveal the bilateral limitation of abduction and the "piston" motion of both hips.

When the child begins to walk, there should be no difficulty in making a diagnosis of dislocated hip. The child usually has no complaints except that she may fatigue easily on exertion.

Occasionally overactivity may produce a slight pain. A unilateral dislocation results in a distinct limp which is non-painful. The child with a bilateral dislocation walks with a "duck waddle" type of gait, has broad buttocks, an increase in the lumbar lordosis and a protrusion of the abdomen. All the objective signs previously mentioned may be observed in either case and in addition a positive Trendelenberg sign can be demonstrated. This consists in having the patient stand on the affected leg and raise the opposite foot off the floor. Because the femoral head is not in the acetabulum to act as a fulcrum, the glutei muscles cannot tilt the pelvis down on the affected side as occurs in a normal hip.

A diagnosis of subluxation of the hip is rarely made in the pre-walking stage, except by roentgenograms. In some European countries, where the incidence of hip dysplasia is very high, infants are routinely x-rayed in many clinics and a large number of subluxations detected. After the child starts walking, the same objective findings may be noted as are found with dislocated hips. However, they are much less in evidence and the telescoping of the femoral head usually cannot be demonstrated.

The x-ray appearance of a dislocated hip is quite conclusive, especially after the third or fourth month of life when the nucleus of the head is visible. Interpretation of the roentgenogram in a subluxation may be more of a problem, particularly in the infant. But the points to be looked for are as follows: (1) an irregular Shenton's (obturator-coxo-femoral) line (2) increased joint space (3) a sloping roof of the acetabulum with a shallow socket (4) delayed development of the center of ossification of the femoral head and (5) slight displacement of the femoral head from the socket. The latter may be difficult to determine except by a method such as that of Bruce. Draw a horizontal line through the clear areas which represent the triradiate cartilage and a vertical line through the edges of the acetabular roof. Normally the epiphysis of the femoral head lies medial to the vertical line and below the horizontal. In a subluxation it lies below the horizontal line but lateral to the vertical and in a dislocation it lies both above the horizontal line and lateral to the vertical.

Coxa Vara.—The symptoms of congenital coxa vara are variable, but never make their appearance until walking begins and often are delayed for several years. A limp, slight pain and stiffness are the usual early objective findings. The onset is usually insidious but sometimes occurs after a slight trauma. On examination, one notes a restriction of abduction and internal rotation, while adduction and external rotation are increased. There may be some tenderness about the joint, but no swelling, redness or increased warmth. Pain is often elicited by manipulation of the joint and may be referred to the knee. As the deformity progresses the greater trochanter becomes prominent, shortening occurs and an external rotation of the leg may develop.

The roentgenogram of congenital coxa vara is characterized by a decrease in the angle of the head and neck to the shaft of the femur. There is a demarcated triangular area of bone in the neck of the femur which is bounded medially by the epiphyseal line, laterally by an abnormal band of decreased density and below by the lower border of the femoral neck.

Transient Synovitis.—Transient synovitis is a non-specific, non-pyogenic inflammation of the synovia which is usually insidious in onset, but sometimes is acute following a trauma. A painful limp is the customary initial symptom and is often accompanied by a fever of 100°-101°. The pain is usually mild and fleeting at first and then becomes more severe in one to two weeks. There is a spasm of the muscles about the hip joint and tenderness on palpation over the head and neck of the femur. The hip becomes flexed, adducted and internally rotated. Recovery within a few weeks is the rule.

Roentgenograms are always negative. The laboratory is of some diagnostic assistance since there is usually a slight increase in the white blood cells and the sedimentation rate. Aspiration yields a clear exudate.

The diagnosis of transient synovitis should be made only after septic arthritis and tuberculosis have been definitely ruled out. It is sometimes confused with early rheumatic fever but the latter is differentiated by involving more than one joint as a rule, by its longer duration and by the accompanying cardiac findings.

Septic Arthritis.—Septic arthritis, commonly produced by staphylococcus aureus or a hemolytic streptococcus, usually appears in a child

under one year of age. The initial symptoms may be similar to those of transient synovitis but they are often more abrupt in onset and the pain is more severe. The joint becomes swollen and hot. Pain is elicited on slightest movement and weight bearing is so painful it may soon become impossible. The joint then becomes fixed in flexion. The temperature is elevated to 102°-104°, and there is a marked increase in the white blood count and the sedimentation rate. The blood culture often shows a septicemia. However, some young infants may have such a feeble general reaction that leukocytosis and fever do not appear.

X-rays show no significant changes early, but a few months later may show loss of articular cartilage. Aspiration of a purulent fluid, containing pyogenic organisms on smear and culture, establishes the diagnosis beyond all doubt.

Tuberculosis.—The majority of cases of Tuberculosis of the hip occur under the age of five years. A history of contact with a relative or friend of the family known to have an active pulmonary tuberculosis can often be obtained. The symptom which usally brings the patient to the doctor is pain, but the history shows that it is preceded by one or more of the systemic manifestations of malaise, pallor, anorexia, loss of weight and elevated P.M. temperatures. At first the child may complain of slight pain and stiffness when arising in the morning and then it gradually disappears during the day. Later more muscle spasm develops as the cartilage becomes ulcerated. Pain is still not a chief factor in the day time, although the child begins to walk with a limp. But when the muscles are relaxed in sleep and the child moves without the protective muscle spasm, a severe pain is experienced and she wakes up crying. The pain is also usually referred to the knee, and in fact may be noticed there before it is felt in the hip. This holds true, of course, for the pain originating in the hip in any disease.

As long as the child continues weight bearing the hip develops a flexion, abduction and lateral rotation contracture — the position of most comfort when bearing weight. But when weight bearing is discontinued the hip goes into adduction and internal rotation. In the early case, before any deformity is noticeable, the limitation of extension can be determined more readily by having the child lying prone on a table and then attempting to extend the thigh. Thickening of the joint may be discerned on palpation and muscle atrophy noted.

An absence of high fever and leukocytosis distinguishes tuberculosis from septic arthritis. The usual temperature is 99° — 100°, but if an abscess forms later it may go higher and then simulate a Septic arthritis.

Early x-rays may show no significant changes. The earliest sign is a haziness of the joint due to edema of the synovia. But when effusion develops, the space between the femoral head and the acetabulum is increased. As atrophy develops, the head is more radiolucent and then an area of destruction is seen.

Certain diagnostic procedures should be carried out on all cases suspected of hip Tuberculosis. A positive tuberculin test does not indicate the presence of an active lesion; but a negative one, especially if increased to a strength of 1:500 definitely rules it out. Urine and sputum specimens (stomach washings are often necessary to obtain specimens in children) should be checked by smear, culture and guinea pig innoculation to determine if any tubercle bacilli can be found in the kidneys or lungs. If there are enlarged inguinal lymph glands, a biopsy study often reveals the presence of tubercles. An aspiration should be performed and studied by smear, culture and guinea pig innoculation. Sometimes the tubercle bacilli can be found in the smear and culture, but more often it is necessary to wait for the guinea pig study. Even a negative guinea pig which has been injected with joint fluid should not be accepted as positive proof that tuberculosis is excluded. If clinical signs persist, a biopsy of the synovia and articular cartilage is indicated. This should give a definite answer if a representative section of tissue has been taken.

Coxa Plana (*Legg-Perthes' Disease*).—Children between the ages of five to nine are most commonly afflicted with this form of aseptic necrosis of the capital femoral epiphysis. However, it is sometimes seen as early as the age of three and as late as the age of twelve or thirteen.

Pain may begin early in the disease process, but sometimes it does not occur until much later. The onset is slow and insidious. Again the pain may be first noted in the knee and it is because the doctor focuses his attention on the knee that many cases are not diagnosed early. The

pain and muscle spasm are not so severe as in septic arthritis or tuberculosis, nor is there any accompanying fever or leukocytosis. The principal objective findings are a limp and a moderate degree of limitation of motion. Sometimes a limp is noted before the child complains of any pain. Due to the muscle spasm, the hip becomes flexed and adducted as compared to the position of abduction in the early tuberculosis. Although the spasm may subside, the limb usually remains fixed in this position because of the shortening of the flexors and adductors. Later in the disease the muscles may become atrophic due to disuse, but the atrophy is not so marked, nor seen so early as in tuberculosis.

The earliest x-ray evidence of coxa plana is a widening of the joint space and an increase in the distance between the epiphysis and the bottom of the acetabulum (commonly known as the "tear drop"). This is due to excess synovial fluid filling the joint space. Also cystic areas in the metaphysis may sometimes be seen early. A little later, an increased density appears in the femoral epiphysis and this is best seen in a lateral view. As the disease process continues, the epiphysis progressively becomes flattened, then fragmented and finally the fragments coalesce and the density of the epiphysis diminishes as healing occurs.

Epiphyseolysis.—Epiphyseolysis, or slipping of the capital femoral epiphysis, occurs during the most active growth period between the ages of ten to sixteen years. About 70% are obese and exhibit endocrine disturbances (Froelich type). Tall, thin children, with a rapid skeletal growth, are also quite prone to develop an Epiphyseolysis. The condition is more common in males than in females.

The onset of symptoms is usually insidious with a limp and intermittent mild pain in the hip and/or the knee. The leg gradually becomes externally rotated and is accompanied by slight shortening. On examination, there is very little tenderness or spasm about the hip, but there is a limitation of internal rotation and abduction.

An acute form is occasionally seen following trauma, resulting in a sudden slipping of the epiphysis. In this case the pain is more severe, sometimes preventing the patient from being able to walk.

If roentgenograms are made at the beginning of the first symptoms, in what may be called the "pre-slipping" stage, the epiphyseal line appears wider than normal and changes in the metaphyseal bone may give a fuzzy appearance. As slipping occurs, the neck slips upward and anterior to the head. This can best be seen on the lateral view in the initial stages. On the A-P view there is a gradual loss of the normal "hump" which exists at the junction of the capital epiphysis and the femoral neck, and there is a disturbance of Shenton's line.

It should be remembered that about 25% of the cases of epiphyseolysis are bilateral, either simultaneous or at a subsequent time. Therefore any child in whom a diagnosis of epiphyseolysis has been made on one side should have frequent roentgenograms made of the opposite side until the epiphyseal line has disappeared.

Bone Tumors.—In searching for a cause of hip pain in children, too often tumors of the pelvic bones, and the neck and trochanteric region of the femur are overlooked in the early stages. Most of them occur after the age of ten. Of the six tumors listed in the outline on the first page, osteochondroma is the only one in which pain is not an early symptom. The osteochondromas may go unnoticed unless they produce pressure against some vessels or nerves or become so large as to produce a mechanical block or be easily palpable. On the x-ray it appears as a well defined projection from the normal bone and is surrounded by a thin shell of cortical bone.

Pain, of varying intensity, is common to osteoid osteoma, fibrous dysplasia, eosinophilic granuloma, osteogenic sarcoma and Ewing tumors. The last three named usually produce some swelling, although it may not become evident in the early stages. A Ewing tumor is accompanied by fever and leukocytosis. Otherwise there are no other clinical or laboratory findings of diagnostic importance.

When the typical "text book" picture of the various tumors is seen on the roentgenogram, a diagnosis might be made on that basis. The osteoid osteoma shows a small area of radiolucency surrounded by an area of increased density. A fibrous dysplasia may exhibit either a "ground-glass" or cystic appearance. When the latter occurs it cannot be distinguished from an eosinophilic granuloma or a simple bone cyst.

An osteogenic sarcoma shows evidence of both bone destruction and bone formation with an irregular invasion of the tumor into the soft parts. In the early stages of Ewing tumor there is only condensation of bone and it later is followed by the "onion skin" layer appearance parallel to the bone. Destruction of the original bone structure is not seen until a late stage.

But whatever the x-ray appearance may be, the exact diagnosis of the bone tumor is usually not made until a biopsy study has been done. This should not be neglected in any case of doubt.

SUMMARY

In establishing a diagnosis of one of the several disorders which may occur in the hips of children, one must combine a careful history and physical examination, roentgenographic and laboratory studies and often joint aspiration and biopsy. The most important of the diagnostic aids for each of the conditions under consideration, however, may be given in summary as follows: (A) History, physical examination and roentgenograms for all the congenital disorders, coxa plana and epiphyseolysis; (B) Laboratory studies and joint aspiration for the infections; (C) Roentgenograms and biopsy for the bone tumors.

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SUMMARIZE RESEARCH ON VITAMIN E THERAPY

Protagonists of vitamin E therapy have not reported any results derived from critical clinical tests, says a report of the Council on Pharmacy and Chemistry of the American Medical Association.

The report, which appears in the February 18th Journal of the A.M.A., says in part:

"More than three years ago, stories appeared concerning a remarkable new treatment for patients with circulatory disease. The treatment was said to have been discovered by some investigators in London, Canada. It was alleged that large doses of vitamin E could effect remarkable recoveries in patients with a wide variety of cardiovascular disorders who had not been benefited by more orthodox therapy.

"The protagonists of vitamin E therapy have not reported any results derived from critical clinical tests, although medical and lay literature contain reports which, to the uncritical, might appear to lend support to the hypothesis that vitamin E is useful in the treatment of heart disease.

"It is regrettable that the hopes of sufferers from heart disease and other cardiovascular conditions, as well as those of countless diebetic persons, should be falsely raised by unbridled enthusiasm."

The A.M.A. report cites a number of "carefully conducted and adequately controlled" studies which, according to the Council on Pharmacy and Chemistry, failed to substantiate early reports of the usefulness of vitamin E in heart disease and diabetes.

CASE RECORDS OF THE COOK COUNTY HOSPITAL

KARL MEYER, LEO M. ZIMMERMAN, DEPT. EDITORS

Alcoholic Neuropathy and Laennec's Cirrhosis

William Saphir, M.D., F.A.C.P. and Jean Spurlock, M.D.

The detrimental effects of alcohol upon both the central nervous and digestive systems are well known. In the Cook County Hospital there are always patients under observation who are suffering from either alcoholic neuropathy or alcoholic cirrhosis. However, the co-existence of both diseases in one individual appears to be a rare event. Current textbooks [1, 2, 3] do not mention polyneuritis as a part or as a complication of alcoholic cirrhosis and vice versa. One could perhaps assume that such a combination does not exist or that one alcoholic disease process excludes another.

It is for this reason that a case is hereby presented offering the classical picture of both, alcoholic cirrhosis and alcoholic polyneuropathy. An analysis is made of the findings involved in an attempt to offer an explanation for this rare combination.

Mr. C. L., a 61 years old white male of Hungarian descent was admitted to the Cook County Hospital October 7, 1949. During the past recent months he had noted tingling and numbness of hands and feet as well as gradually increasing weakness in the extremities so that it became difficult to walk for any length of time or to hold a glass of water in his hands. He had lost 20 lbs in the preceding months which he attributed to lack of appetite, nausea and occasional vomiting. He admitted a daily intake of approximately one quart of wine for many years. Recently, he had noted enlargement of the abdomen and dyspnea upon exertion.

Physical examination revealed a poorly nourished white male lying comfortably in bed. There was considerable pallor, and pitting edema around the ankles. The blood pressure was 120/60. There were scattered moist rales over both lower lungs, and moderate cardiac enlargement to the left, with the apex beat in the fifth interspace just lateral to the midclavicular line. There was a soft apical systolic murmur and the rhythm was regular.

The abdomen was distended and soft. The liver was hard and nodular, and could be felt with the edge reaching to six cm. below the right

From the Medical and Neurological Department, Cook County Hospital, Chicago, Illinois.

costal margin. The spleen was enlarged, firm, not tender, and palpable, reaching to two cm below the left costal margin. The presence of ascites could not be ascertained definitely.

Significant neurological findings were a decrease of vibratory sensation at and below the anterior iliac spines, anesthesia over the distribution of the right ulnar nerve, and a patchy hyperes-thesia over lower limbs. There was tremor of upper extremities on motion, there was weakness of left arm and interossei atrophy. There was marked diminu'ion of motor power of the lower extremities so that the patient was unable to walk unaided. There were decreased deep tendon reflexes.

Laboratory findings: The urine was negative to albumen, glucose, and abnormal microscopic findings. Examination of the blood revealed a red blood cell count of one million, a hemoglobin of 46%, a white blood cell count of 6,350 with a differential count of 59% neutrophiles, 34% lymphocytes, 6% monocytes and 1% eosinophiles. The non protein ni'rogen was 40 mgm%, the total plasma protein 5.9 gm% with an A/G ratio of 2.9 to 3.0. The icteric index was 20, the thymol turbidity 6, and the cephalin flocculation 3 plus. An Xray chest plate was reported as negative. The electrocardiogram showed no abnormality. Gastric aspiration revealed the presence of an achlorrhydria refractory to histamine. Spinal fluid examination disclosed absence of cells, a protein content of 22 mgm%, glucose 55 mgm%. The spinal Wasserman reaction was negative. A sternal bone marrow aspiration was performed and repor'ed as noncontributory.

Course: The patient was placed on a high protein, high caloric diet with vitamin supplements and Brewer's yeast, five tablets q.i.d. In addition, the patient received nicotinic acid 25 mgm t.i.d. and daily intramuscular injections of 100 mgm thiamine chloride. Crude liver extract one cc was given twice weekly. Under this regime the patient seemed to respond favorably, although slowly. The improvement seemed to be accelerated when the mode of administration of thiamine chloride was changed from the intramuscular to the intravenous route. After one month's treatment the red blood cell count rose to 3.7 Million, and the hemoglobin to 67%. Six weeks after treatment was begun the total blood protein values reached 7.6 gm% with an albumin fraction of 3.5 gm% and a globulin of 4.1 gm%. The icteric index dropped to 7. The thymol turbity and cephalin flocculation tests remained at abnormally high levels, the former at 8.2 and the latter at three plus.

At the time of the writing, twelve weeks after initiation of treatment, there is marked improvement of the neurological disorder. The patient is able to walk unaided, the motor power in extremities is considerably increased, subjective pain sensations have largely disappeared. There has remained a considerable atrophy of musculature, especially of the upper extremities, a rest type of tremor of both hands, a hypesthesia along the ulnar distribution of the right hand, a decreased vibra'ory sensation in the right lower extremity and a mild ataxia, heel to knee and finger to nose. The patient's general condition appears good. Physical findings in regard to hepatosplenomegaly have remained essentially unchanged.

COMMENT

The role of alcohol in the etiology of Laennec's portal cirrhosis and alcoholic polyneuropathy is well established. However, there is no uniformity of opinion[4] as to the exact mode of action in the pathogenesis of these diseases. Perhaps the most common assumption today is that alcohol does not act as a specific toxic agent but that a nutritional deficiency state is brought about by the anorexia of the alcoholic by the alcoholic gastritis, by the achlorhydria and by the rapid metabolism of the alcohol itself.

Experimentally, diets high in fat, low in protein, and deficient in thiamine, cholin, niacin, pyridoxin and other members of the vitamin B complex have produced disease pictures indistinguishable from human fatty cirrhosis and hepatitis[4]. Alcoholic polyneuropathy is considered a manifestation of thiamine deficiency probably leading to pyruvic acid intoxicaton. For some time, it has been known that pyruvic acid, a normal intermediate metabolit of carbohydrate metabolism is not metabolized in the absence of thiamine.

If alcohol is the common denominator of both diseases, Laennec' cirrhosis and alcoholic polyneuropathy, an explanation should be found why 'hese diseases are so rarely co-existent in one individual. There is little doubt that there exists a marked deficiency of thiamine and other vitamins in the untreated alcoholic cirrhotic. Yet,

a significant degree of polyneuritis is usually absent. Could one assume that the peripheral nervous system by some unknown mechanism appears well protected against thiamine deficiency damage in alcoholic cirrhosis? Our case offered the classical findings peculiar to both conditions. The only unusual feature was the presence of a severe anemia upon admission. Whereas moderate anemias of the macrocytic or normocytic type are not uncommon in liver diseases[5] the marked anemia of one million red blood cells and the hemoglobin of 46% upon admission must be considered a rare occurrence. In the presence of a normal bone marrow the anemia appeared to be related to nutritional factors, to the achlorhydria and to the marked liver damage.

It would, therefore, seem reasonable to assume that the extreme anemia in our case added further anoxic damage to a peripheral nervous system already made vulnerable by thiamine deficiency.

It is fully realized that no proof can be offered at this time for these theoretical considerations. It is also true that no satisfactory explanation can be given as to the question why alcoholics by virtue of their thiamine deficiencies may develop either polyneuropathy, or Laennec' cirrhosis, or alcoholic psychoses or alcoholic Wernicke' disease. The fact remains that for some unknown reason there is usually only one manifestation of "alcoholic disease" to be found in one individual. It is hoped that analyses of further such rare cases may shed some light upon the obscure pathogenesis of alcoholic diseases.

SUMMARY AND CONCLUSIONS.

An unusual case is presented offering the rare combination of alcoholic polyneuropathy and Laennec's alcoholic cirrhosis.

The etiology and pathogenesis of both conditions is discussed.

It is believed that the extreme anemia in our case was instrumental in adding further anoxic damage to a peripheral nervous system that in spi'e of severe thiamine deficiency appears remarkably well protected in the case of the alcoholic cirrhotic.

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FIND ETHYL ALCOHOL UNSATISFACTORY DISINFECTANT FOR WOUNDS

Ethyl alcohol, the ordinary alcohol of commerce and pharmacy, should not be used as a disinfectant in wounds or on raw surfaces of injured areas, according to a Salt Lake City doctor who made a study of the substance.

The antibacterial action of ethyl alcohol is neutralized by proteins present in the wound, says Dr. Philip B. Price of the University of Utah College of Medicine. Dr. Price's report appears in the March issue of Archives of Surgery, published by the American Medical Association.

Further, the alcohol is painful, injures wound tissues and delays wound healing, Dr. Price points out.

Simple solutions of ethyl alcohol are not satisfactory agents for cold sterilization of surgical instruments, Dr. Price also found.

Seventy per cent alcohol (by weight) in water, however, is still believed to be the "solution of choice" for disinfection of the skin, he says. On healthy skin, this solution is powerfully destructive to germs and harmless to the body.

CASE REPORTS

Rhinophyma and Acne Rosacea Treated With the Electrosection Current

William A. Rosenberg, M.D., and I. Myron Felsher, M.D.
Chicago

The final stage of acne rosacea, known as rhinophyma, is a grotesque enlargement of the lower two-thirds of the nose, and may occasionally involve the chin[1] or forehead. Rhinophyma is observed frequently in men, but is exceedingly rare in women. It is indeed curious that rhinophyma is rare among women although acne rosacea occurs in the ratio of three females to one male[2].

The rosacea complex is a vaso-motor neurosis caused by reflex circulatory disturbances involving the flush area of the face. Predisposing factors include: chronic gastritis resulting from over-indulgence in caffeine, spices or alcohol, although in some instances the affection has been observed in most temperate persons. Other attributive factors are disturbances of the female reproductive system, neurosis, focal infection and exposure to sudden extreme changes of temperature.

From the Department of Dermatology, Michael Reese Hospital.

Recently we treated a case of rhinophyma and acne rosacea in a woman with the electrosection current. Since the lesions responded favorably, we thought it advisable to make a preliminary report on this form of therapy.

D. C., an obese white woman, aged 63, was referred to the Dermatologic Clinic of the Michael Reese Hospital on June 26, 1947 for treatment of an eruption of the face and hypertrophy of the nose. The eruption on the face was of 15 years' duration and the rhinophyma of 2½ years' duration. Examination showed diffuse erythematous patches on cheeks, forehead and chin, with considerable telangiectasis and acneform lesions. The nose was hypertrophied, distorted with areas of tumefaction and pedunculated masses. The follicular orifices were distended with large comedones. An associated rosacea keratitis was also present.

The examination of the urine, blood cholestrol, lipoid, and Kahn tests were within normal limits. On May 20, 1948 the patient developed an acute

Figures 1 and 2. Rhinophyma before and after treatment by electrosection current.

dermatitis about the genitals, and at that time sugar was found in the urine. The glucose tolerance test showed fasting-375 mg., thirty minutes-593 mg., sixty minutes-490 mg., three hours-270 mg. per hundred cc.

Under local anaesthesia on June 27, 1948, July 10, 1948 and Nov. 18, 1948 the left side, right side and lower portion of the nose were treated in the order stated respectively with the electrosection current.

Some of the indolent acneform papules were treated by inserting a fine steel needle into the lesion following which the needle was energized with the oscillating current for about 1/10th of a second. The lesions so treated healed promptly.

The advantages of the electrosection current in rhinophyma are that infections are less likely to occur with this method, the patient need not be hospitalized, and skin grafts are unnecessary. Although the patient was obese and diabetic, the lesions healed promptly within three weeks after treatment.

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Severe Anaphylactic Reaction To Wasp Sting

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Chicago

Wasp or bee stings are occasionally followed by severe anaphylactic reactions. Reports[1-4] of such reactions stress the rapid onset of symptoms, urticarial lesions, localized or generalized edema, unconsciousness and a severe state of shock. The mechanism of anaphylactic shock produced by bee or wasp stings is rather complex. Benson and Semenov[5] are of the opinion that it may be due to the venom, to the reaction of the individual to pollen adhering to the insect or to sensitivity of the individual to allergens inherent in the insect. The subject of severe reactions, fatal or otherwise, has been exhaustively considered by Roch[6] and Courboulles and Mandillion[7]. Necropsy examinations on persons dying of wasp or bee stings are limited in number. Recently Von Wegelin[8] reported the necropsy findings in three cases of sudden death due to bee or wasp stings. The gross findings include hyperemia of the internal organs, edema of the lungs and larynx, petechial hemorrhages into the skin and mucous membranes and occasionally in the meninges and brain.

We are reporting a case of severe anaphylactic shock as a result of a wasp sting. Complete recovery followed the administration of epinephrine and parenteral diphenhydramine hydrochloride (benadryl).

CASE REPORT

On August 28, 1949, a 58 year old white male was admitted to the St. Francis Hospital emergency room in a shock-like state, extremely restless, unresponsive, with profuse sweating, flushed face and cyanosis of the lips and fingernails. It was learned from a companion that the patient had been stung on the upper lip by a wasp about forty minutes earlier while attending a picnic. Within 3 to 5 minutes he began to behave abnormally and shortly afterward collapsed. On arrival at the hospital the blood pressure and the radial pulse could not be obtained. The skin was cold and clammy, face flushed and the lips and nails were cyanotic. It was noted that the upper lip was markedly edematous. Respiration was rapid, shallow and somewhat labored. Lung fields were clear and free of wheezing breath sounds. The heart tones were very distant with a rapid apical rate. Examination of the abdomen and reflexes revealed nothing of significance. Immediately upon admission to the hospital, oxygen by mask and a venoclysis of 5% glucose in physiological saline solution was administered. Shortly afterwards 20 mg. of diphenhydramine hydrochloride (benadryl) was given intravenously and 0.5 cc. of epinephrine 1:1000 subcutaneously. About five minutes later a barely discernible blood pressure reading of 80/60 was obtained. The radial pulse was not palpable. At this time it was observed that the patient's hands, feet and legs were becoming edematous. He was still unresponsive and restless. A second intravenous injection of benadryl, 10 mg., was administered. In a short while the patient began to respond and cooperate. The blood pressure rose to 110/80 and the radial pulse could be determined. With the return of consciousness a profuse bloody diarrhea developed. This continued intermittently during the next 24 hours. The local edema involving the upper lip as well as the edema of the hands and legs disappeared within 18 hours. The patient was able to take liquids orally 2-3 hours after the acute attack. His only complaints on the following day were generalized muscle aching and headache. These symptoms gradually subsided and he was discharged 3 days later feeling quite well. On admission, blood counts were as follows: hemoglobin 22.8 grams, erythrocytes 7,020,000, leucocytes 11,450 with a differential pattern of 7% stab forms, 81% neutrophils and 12% lymphocytes. The next day the blood revealed:

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hemoglobin 16 grams, erythrocytes 5,310,000, leucocytes 8,500.

COMMENT

The response of an individual to bee or wasp stings is variable. Some persons may receive many stings at the same time and merely demonstrate minimal local reactions. However, there are several reports in the literature describing a shock-like syndrome and death within a few minutes following a single sting. It is generally believed that this intense sensitivity is of an allergic character and may be due to sensitization developed after previous stings. Roch[6] and others have suggested that the immediately fatal and the severe reactions are probably due to the entry of the venom directly into the blood stream. It has also been noted that severe reactions are likely to occur when the site of the sting has a thin covering of skin and is of high vascularity such as the lips and the dorsum of the hand.

Until recently the immediate treatment of severe anaphylaxis due to wasp or bee stings has been the administration of epinephrine. It has been demonstrated[5] that bee venom produces a histamine-like action. In view of this and the similarity of the symptoms to those induced by histamine, it seems advisable to use one of the antihistamine drugs in the treatment of this emergency.

SUMMARY

A case of severe anaphylactic reaction to a wasp sting is recorded. Complete recovery followed the administration of parenteral diphenhydramine hydrochloride (benadryl) and epinephrine.

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FIND BLOOD TEST FOR CANCER NOT SUITABLE FOR DIAGNOSIS AT PRESENT

The Huggins-Miller-Jensen blood test for cancer does not appear suitable at present as a diagnostic test, in the opinion of two researchers from the Department of Experimental Pathology, Quincy (Mass.) City Hospital.

The test, based on albumin disturbance in cancer patients, was first reported about a year ago by Dr. Charles B. Huggins of the University of Chicago.

The diagnostic value of the procedure followed by Dr. Huggins and his co-workers was tested by Dr Otakar J. Pollak and Adeline Leonard, B.S. Their report on test results from blood serums from 80 patients with proved malignant growth and on control serums from 170 patients appears in the March 25th Journal of the American Medical Association.

In seven of the 80 patients with proved malignant growth, the test failed to indicate the presence of cancer, the researchers say. In 23 of the 170 persons in whom malignant growth was excluded on the basis of clinical signs and laboratory and x-ray study, the test indicated malignancy. The total number of false reactions in the series of 250 persons was 30 (12 per cent).

"At the present time, this reaction is not suitable as a diagnostic test," the researchers point out. "Further investigation might bring about the development of a reaction the result of which would show better correlation with disease."

PATHOLOGY CONFERENCES

EDWIN F. HIRSCH, DEPARTMENT EDITOR

PRESENTATION OF TWO CASES

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COLLOID CARCINOMA OF THE CECUM WITH EXTENSIVE METASTASIS

This 42 year old white woman entered St. Luke's Hospital to the service of Doctor Chester Coggeshall for the second time on September 17, 1949 and died on September 19, 1949. At her first admission in May 1949 she complained of pain in the lumbar region and nausea of three weeks' duration and a mass in the neck. The constant nausea was associated with cramping pains in the lower right abdominal quadrant. There had been no vomiting, diarrhea, or constipation but the stools had dark red blood. Occasionally she had pain in the left side of the chest anteriorly, and for about a week before admission blood was in the sputum. The patient was a thin, pale white female. She had nontender, fixed, enlarged matted and discrete lymph nodes in the supraclavicular fossa on each side, behind the sternocleidomastoid muscle. A small firm nodule in the suprasternal notch seemed to move with swallowing. The spoken voice sounds over the apical region of the left lung were decreased; otherwise the lungs were negative. The heart sounds, rate and rhythm were normal. The blood pressure was 128/70 mm. of Hg., the pulse 78 and the respirations 16 per minute. The temperature was 99°F. A hard nodular mass the size of a baseball was in the epigastrium just below the tip of the xiphoid process and seemed separated from the liver. The liver margin was palpable about 5 cm. below the right costal arch and was slightly tender. The left lower quadrant of the abdomen was tender on deep palpation. The physical examination otherwise was negative. Fluoroscopic study and a film of the chest revealed mediastinal shadows. X-ray examination of the colon disclosed a large filling defect in the cecum opposite the ileo-cecal valve. The urine had a specific gravity of 1.020 and contained 6-12 leukocytes per high power field examined, but otherwise was negative. The erythrocytes were 3.11 million and the leukocyte 7,550 per cu.mm. The hemoglobin was 8.7 grams percent. The blood Kahn test was negative. The blood non protein nitrogen, sugar, cholesterol and phosphorus of the blood were within normal limits. The alkaline phosphatase was 8.2 Bodansky

units. The total serum proteins were 6.15 grams percent and the albumin-globulin ratio was 2.8:3.35. The thymol turbidity was 5.5 units. The blood sedimentation rate was 42 mm. in one hour. A supraclavicular lymph node removed for biopsy contained coarsely lobulated, gelatinous gray tissue; portions were yellow. Grossly the tissue had the appearance of colloid carcinoma. The histologic examinations confirmed this. The clinical diagnosis was adenocarcinoma of the cecum and metastatic glandular (colloid) carcinoma of cervical lymph node. The patient was re-admitted on September 17, 1949 because of progressive weakness and a sensation of fullness in the abdomen. Since her first admission the stools contained red blood and at times were tarry. The patient was comatose, emaciated and markedly jaundiced. The pupils responded slightly to light. The respirations were shallow. Rales were heard at the base of both lungs. The cardiac findings were not unusual. The blood pressure was 86/50 mm. of Hg., the pulse 116 and the respirations 28 per minute. The temperature was 99°F. The abdomen was distended with fluid. The liver was palpable below the costal margin. The deep tendon reflexes were sluggish. The physical findings were similar to those of her previous admission. She died on the second day in the hospital.

The essentials of the anatomic diagnosis of the necropsy are:

Colloid carcinoma of the cecum;

Extensive metastatic carcinoma of the liver, lungs, pancreas, left suprarenal gland and of the abdominal, cervical, parabronchial, supraclavicular and mediastinal lymph nodes;

Metastatic carcinoma compression of the common bile duct;

Marked generalized icterus;

Ascites;

Bilateral hydrothorax;

Emaciation;

Hemorrhages of the cecum and large bowel.

The emaciated and markedly jaundiced body of this white woman weighed 130 pounds. The cervical and supraclavicular lymph nodes were large. On the left side of the neck was an old surgical biopsy scar. The feet were slightly edematous. The abdomen was distended with

Figure 1. Photograph illustrating the primary colloid carcinoma of the cecum.

a large quantity of clear bile-stained fluid. The iliac, lumbar, mesenteric, gastric, hepatic and pancreatico-duodenal lymph nodes were markedly enlarged. Surfaces made by cutting the lymph nodes were replaced by nodules of yellow gelatinous tumor tissue. The cecum had an annular carcinoma which extended 6 cm. in the bowel and 12.5 cm. in the circumference (Figure 1). In the lumen of the cecum and large bowel was a large amount of dark red blood. The liver weighed 3970 grams and filled the upper quadrants of the abdomen. The capsule had many small elevated gray-yellow tumor nodules and the tissue were bile-stained. Much of the right lobe was replaced by a large mass of yellow gelatinous carcinoma tissue 14 cm. in diameter. There were other similar but smaller carcinoma nodules in both lobes. The liver tissue between the carcinoma nodules was dark green with bile. The markedly dilated gallbladder was 12 by 5 cm. The biliary lymph nodes were matted into a hard mass 7 by 7 by 3 cm. The common bile duct near its termination was compressed by a mass of tumor tissue 2.5 by 2 by 1 cm. The lumen of the common duct, the cystic duct, the gallbladder and the right and left hepatic ducts was dilated. Above the level of the tumor tissue compression the common duct had an inside circumference of 4 cm., and below an inside

Figure 2. Photograph illustrating the multiple metastatic carcinoma nodules beneath the pleura of the lungs.

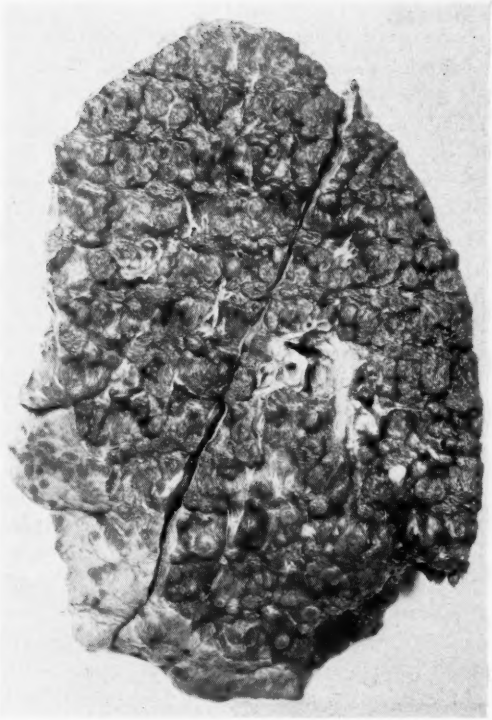

Figure 3. Photograph illustrating the multiple metastic carcinoma nodules in the parenchyma of the lungs.

circumference of 2 cm. The pancreas was also infiltrated by metastatic tumor tissues. The lining of the pancreatic duct was grey and smooth, but the lumen was irregularly dilated. The right suprarenal gland weighed 9.5 grams. The left suprarenal gland was 6 by 3 by 2.5 cm. and weighed 24 grams. The parenchyma was largely replaced by yellow gelatinous tumor nodules and only a rim of cortex remained. The right kidney weighed 110 and the left 130 grams. The kidneys were stained with bile and were hyperemic. The spleen weighed 155 grams, and was also stained with bile. The lining of the stomach and the large and small bowel except as mentioned, was hyperemic. The urinary bladder had no changes. The uterus had a few small subserous and intramural fibromyomas. The ovaries and fallopian tubes had no significant changes. There was a marked bilateral hydrothorax. The fluid was clear and stained yellow with bile. The lymph nodes at the bifurcation of the trachea and main bronchi were a blackened mass 4 by 3 by 1 cm. and surfaces made by cutting contained yellow gelatinous metastatic tumor tissues. The lining of the trachea and main bronchi was stained yellow with bile and slightly hyperemic. The right lung weighed 1050 and the left 1030 grams. The surface of the lungs (Figure 2) was studded with myriads of firm translucent nodules, rather uniform in size and averaging about 7 mm. in diameter. The lining of the pulmonary arteries and veins was smooth. The lining of the bronchi had the usual longitudinal folds. Surfaces made by cutting the lungs had myriads of small yellow-green gelatinous tumor nodules (Figure 3). Only a small amount of parenchymal tissue remained. The cervical lymph nodes contained metastatic tumor nodules. The upper portion of the esophagus, the trachea, the larynx, the phrynx and tongue were not unusual. The thyroid gland weighed 16 grams. Surfaces made by cutting the thyroid were grey, lobulated, and wet with colloid. The leptomeninges were edematous and hyperemic. The brain weighed 1350 grams. The convolutions were rounded and the sulci correspond-

ingly deep. The cerebral and cerebellar hemispheres were symmetrical and no tumor metastases were seen. The venous sinuses of the dura, the paranasal sinuses, the mastoid air cells and middle ear cavities were not unusual. Cultures of the heart blood, the cerebrospinal fluid and the pericardial, the pleural and the peritoneal fluids had no growth. The histologic preparations of the carcinoma tissues from the cecum had a vascular fibrous stroma extensively ingrown by masses of atypical glandular epithelium which extended into the submucosa and muscularis. The gland structures were complex and lined by columnar epithelium in one or more layers, frequently in blunt villous folds. The glands ranged considerably in size. The lumen of some of the large structures had a basophilic mucinous secretion. There were also other aggregates of atypical cells. These had a granular cytoplasm and vesicular nuclei and in the cytoplasm of some were large vacuoles. Histologic preparations of the various lymph nodes containing tumor tissues were repaced by large and small pseudo-cystic spaces filled with a basophilic mucinous material. A few of the cystic spaces had segments of atypical columnar lining cells in one or more layers. Some of the masses of basophilic material had aggregates of carcinoma cells with retrogressive changes. The metastatic tumor nodules of the liver, the pancreas and the left suprarenal gland had a similar structure. The liver cells also had masses of inspissated bile in the dilated canaliculi and marked fatty changes. The spleen had carcinoma metastases.

COMMENT

Carcinomas of the colon commonly produce mucinous secretion because the tumor cells are derivatives of the goblet cells in the lining. The amount of mucin material produced varies considerably, and even the differentiation of the tumor cells, that is, whether they grow largely as single cells or form atypical glands, seems not to be essential. Those with cells isolated or in small groups and with large vacuoles in the cytoplasm produce mucinous material as well as do those with atypical gland structure. The tumor tissues disintegrate and crevices remaining in the stroma are filled with mucinous material and small group of carcinoma cells. The extensive hematogenous dissemination of a colloid carcinoma of the cecum as observed in this patient, is unusual and therefore remarkable.

CIRRHOSIS AND PRIMARY CARCINOMA OF THE LIVER

A white woman aged 80 years entered St. Luke's Hospital in the care of Dr. Harold Steinberg because of jaundice and abdominal distention for three weeks. For several months she had had anorexia and had lost weight. Her legs and feet became edematous, the stools light in color, the urine dark and her skin icteric. Then rapidly her abdomen became swollen. Blood was not observed in the stools. She had enjoyed good health except for episodes of dyspnoea which were ascribed to a functional deficiency of the heart. When admitted she was markedly jaundiced, had dullness to percussion over the lower posterior portion of the left side of the chest, had a regular heart rate of 48 per minute with a short systolic murmur at the apex. The blood pressure was 120/70 mms. Hg. The distended abdomen had a fluid wave and the right lobe of the liver extended 5 cms. below the costal margin and was hard. The acid urine had a specific gravity of 1.014, contained 5 mgms percent albumin, many leucocytes and bacteria. The blood had 3,260,000 erythrocytes and 6,650 leucocytes per cmm., and a hemoglobin of 9.2 gms. percent. The neutrophil leucocytes were 68 percent. The total nonprotein nitrogen of the blood was 84 mgms, the creatinine 2.8 mgms., and the sugar 67 mgms. percent. The total quantitative bilirubin was 6.4 mgms., the immediate direct 2.4 mgms., and the indirect 4.0 mgms. percent. The alkaline phosphatase was 16.1 Bodansky units. The thymol turbidity units were 27.5 and the blood phosphorus 3.7 mgms percent. The total proteins of the blood were 6.08 gms. percent and the albumin-globulin ratio was 1.1:4.98. The cephalin flocculation test was 3 plus in 24 hours. Other laboratory examinations yielded results in the same pattern.

The clinical diagnosis was cirrhosis of the liver, 3rd degree heart block, carcinoma of the head of the pancreas or of the stomach with generalized metastases. The patient lapsed into coma, she had a daily fever of 101°F., her jaundice and

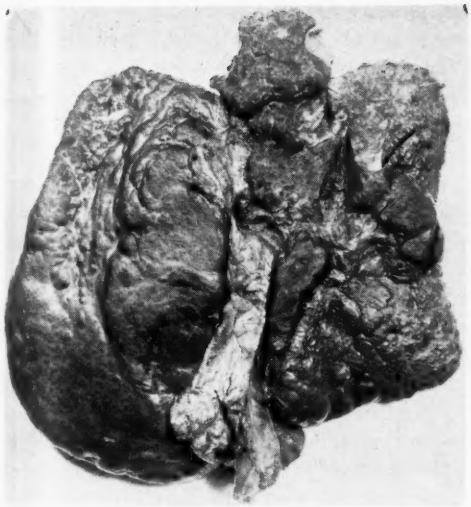

Figure 4. Photograph illustrating the tongue shaped growth of carcinoma tissues from the right lobe of the liver into the common bile duct.

edema increased. Additional laboratory tests disclosed further damage of the liver, and she died suddenly on the 16th day in the hospital.

The essentials of the anatomic diagnosis are:

Atrophic cirrhosis (Laennec) and primary carcinoma of the liver;

Carcinoma invasion and obstruction of the common and hepatic bile ducts;

Carcinoma compression and fibrous obliteration of the portal vein;

Generalized icterus;

Marked ascites;

Anasarca; etc.

The emaciated and markedly jaundiced body of this elderly white woman weighed 165 pounds. The skin on the back and arms had multiple ecchymoses and petechial hemorrhages. The thighs, legs, and feet were edematous. The abdomen contained five liters of dark-yellow bile stained fluid. The retroperitioneal veins were markedly dilated. Each pleural space contained about 200 ccs of clear dark yellow fluid; the right pleural space was partially obliterated by fibrous adhesions. The heart weighed 400 gms. There were no significant changes of the valves or myocardium. The lining of the coronary arteries had moderate fibrous and fatty changes. A subepicardial hemorrhage of the right auricular appendage was 2.5 by 2 cms. The right kidney weighed 150 gms., the left 165 gms. Both had changes of senile arterosclerosis. The biliary lymph nodes contained nodules of grey carcinoma tissues, 2 to 3 mms. dia. A cone shaped mass of bile stained carcinoma tissues extended from the right lobe of the liver through the right hepatic duct into the common bile duct (Figure 4). It was 9 cms. long and at the hilum of the liver was 2.5 cms. in dia. The portal vein was compressed and the walls were fused by fibrous adhesions. The hard, green, nodular liver weighed 1250 gms., and the individual nodules of green liver tissues ranged to 1 cm. dia. A retracted scar 9 cms. long extended vertically on the anterior surface of the right lobe and the green nodular cirrhotic liver tissues lateral to this had a protruding nodule of yellow tissue 3 by 4 cms. (Figures 5 and 6). This, on

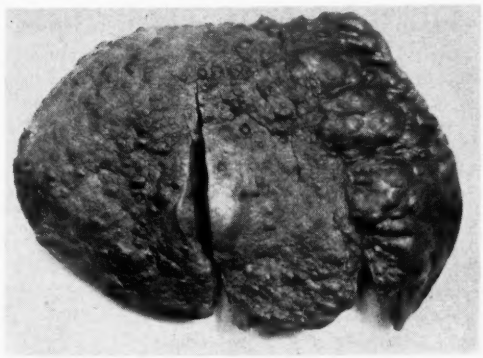

Figure 5. Photograph illustrating the capsular surface of the liver and the protruding nodule of carcinoma tissues.

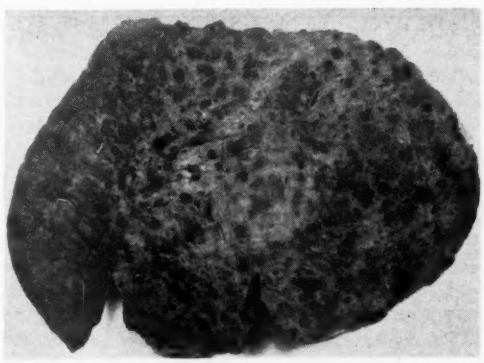

Figure 6. Photograph illustrating the cirrhosis of the liver and near the center, the primary carcinoma.

surfaces made by cutting, had hard green nodules of liver tissues in dense fibrous stroma and grey yellow carcinoma tissues which extended into branches of the ducts and blood vessels. The spleen weighed 200 gms. The lungs had a hypostatic edema and bronchopneumonia but no metastatic carcinoma. Examinations of the head and neck structures disclosed no significant changes.

Histological examinations of the liver demonstrated a marked cirrhosis and in the right lobe a primary carcinoma largely of cells like liver parenchyma but with a few odd lumen —like structures. Carcinoma tissues had grown into the lumen of blood vessels and of bile ducts and formed the mass in the right hepatic and common bile ducts.

COMMENT

The clinical history of this patient affords no clue as to the possible cause of the liver cirrhosis. But primary carcinoma arising in a cirrhotic liver is not uncommon. It occurs with this liver disorder because the stimulus for a compensatory regeneration of destroyed liver parenchyma is comparable to one causing neoplasia. Morphologically, liver tissues in the active phase of regeneration resemble those of an hepatic cell carcinoma. Accordingly, regeneration of hepatic parenchyma following severe necrosis and hepatic cell carcinoma appear to be in the same order of tissue growth. Jaundice, progressive in intensity, is a common symptom of primary carcinoma of the liver, and probably is caused by extensive multiple intra-hepatic obstructions of bile duct radicles by carcinoma. The intense jaundice in this patient should be ascribed to the extension of the carcinoma into the lumen of the common bile duct with bile obstruction. This unusual spread of the carcinoma obstructed bile outflow although the primary carcinoma in the liver was limited in extent.

ELECTRON MICROSCOPE PROVING BIG AID IN MEDICAL RESEARCH

Solutions to some of the vexing problems before medical researchers may be reached through the use of the electron microscope, in the editorial opinion of the March 25th Journal of the American Medical Association.

"Where future research with these microscopes will lead remains to be seen, but there is assurance that if the future findings are as exciting as those of the past few years they will be astounding," says the editorial.

It points out that there is need for precision techniques in the field of microscopic exploration. The electron microscope, which because of its size appears to be built upside down, is being used in the study of plant and animal viruses and of bacteriophages, an utramicroscopic bacteria-destroyed agent.

"The importance of studying the virus (or viruses) responsible for anterior poliomyelitis (inflammation of the gray substance of the spinal cord), influenza viruses, viruses of the pox group and other disease-producing organisms cannot be stressed too strongly," says the editorial.

"One important aspect of the observations made with the electron microscope is the different way in which bacteria and viruses may behave in their living and dying processes. When these variations are better understood it may be possible to explain some of the peculiar differences that arise in clinical problems."

The electron microscope in spite of its cost is becoming more familiar to researchers in the medical, biologic and industrial fields. Electrons are accelerated electrically between a filament and a condenser to a high speed or energy. The microscope is a high vacuum instrument to prevent a collision of these electrons with air molecules. Specimens required for electron microscopy are much thinner than those used in the conventional optical microscopes.

Although the use of the instrument is not limited to bacteriology and virology, its more apparent usefulness for those concerned with health problems lies in these fields, says the editorial.

NEWS OF THE STATE

COOK

Society News.—Doctor Oscar J. Becker recently spoke on "Plastic Surgery of the Ear" before the American Otorhinologic Society of Plastic and Reconstructive Surgery in New York.—The Chicago Rheumatism Society was addressed March 29 by Dr. Michael H. Ebert, Rush professor of dermatology, University of Illinois College of Medicine, on "Dermatologic Manifestations of Rheumatic Diseases." Dr. Frederick R. Schmidt, assistant professor of dermatology, Northwestern University Medical School, opened the discussion.—Dr. Walter J. Reich discussed "Practical Procedures in Minor Gynecology" for a recent meeting of the Wayne County Medical Society in Detroit.—Dr. Maurice H. Cottle addressed the Colorado Otolaryngological Society in Denver, April 12 on "Physiological Basis for Rhinoplastic Procedures.".—Dr. Philip Thorek addressed the second annual meeting of the Oklahoma Academy of General Practice in Muskogee, March 27 on "Large Bowel Surgery." He spoke before the Annual Alumni Association of the University of Buffalo, April 1 on "Acute Appendicitis.".—Dr. Edwin R. Levine participated in a postgraduate course given by the American Trudeau Society and the University of Tennessee, March 21, in Memphis, by presenting "The Clinical Diagnosis and Treatment of Pulmonary Emphysema."

Subsidiary Scholarship Created.—An anonymous donor has given ten thousand dollars to the Chicago Medical School to create a subsidiary scholarship which will be used to subsidize the complete education of a medical student at the school for a period of four years. According to Dr. John J. Sheinin, president of the school, the gift was made in honor of Drs. Milton S. Saslow, Howard A. Engle and Morris Blau of Miami Beach.

University News.—Dr. Charles H. Best, professor of physiology and director of Banting-Best department of medical research, University of Toronto, gave an assembly hour lecture at the University of Illinois, April 12 on "Hormonal and Dietary Regulation of Fat Metabolism.".—Dr. F. Bentley, professor of surgery, University of Durham, gave a similar lecture, April 5, on "Problems in Visceral Blood Flow."

Clinical Heart Meeting.—The clinical section of the Chicago Heart Association, on April 11, devoted its program to the following:

Presiding: Ford K. Hick, M.D., Chairman, Clinical Section Committee; Don C. Sutton, M.D., Program Chairman, Cook County Hospital.

PROGRAM

Heart Failure of Obscure Etiology Occurring in the Post Partum Period. W. R. Meadows, M.D.

Acute Benign Pericarditis. Edward R. Elisberg, M.D.

Subacute Bacterial Endocarditis, Simplified Therapy in Selected Cases by Daily Injections. Italo F. Volini, M.D.

Congenital Methemoglobinemia. Benjamin M. Gasul, M.D.

Dynamics of Interauricular Defects and Right Ventricular Hypertension. O. Prec, M.D.

Pathological Conference. Hans Popper, M.D., Edmund Foley, M.D., Chauncey C. Maher, M.D.

Branch Meetings.—The North Shore Branch of the Chicago Medical Society was addressed April 4 by Drs. Danley P. Slaughter on "Newer Concepts in the Treatment of Carinoma" and Robert J. Jensik on "Carcinoma of the Lung, Diagnosis and Treatment."—Dr. Harry J. Dooley addressed the Northwest Branch, April 7, on "Urinary Calculi" and Dr.

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Special Lectures.—Dr. Jesse E. Edwards, assistant professor of pathologic anatomy, Mayo Foundation, University of Minnesota, will deliver the twenty-sixth Ludvig Hektoen Lecture of the Frank Billings Foundation, Institute of Medicine of Chicago, Friday evening, May 26 at the Palmer House, on "Structural Changes of the Pulmonary Vascular Bed and Their Functional Significance in Congenital Cardiac Disease."—The Institute of Medicine of Chicago on April 28 heard Dr. Cyrus C. Sturgis deliver the ninth Edwin R. Kretschmer Memorial Lecture on "An Evaluation of the Nature, Treatment and Prognosis of Leukemia." Dr. Sturgis is professor of medicine at the University of Michigan School of Medicine and director of the Thomas Henry Simpson Memorial Institute for Medical Research.

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There were 2,137 cases of whooping cough and 14 deaths reported in 1949, an increase over the 1,096 cases and 4 deaths reported in 1948.

Poliomyelitis cases and deaths were up, as compared with the previous year. There were 479 cases and 30 resident deaths reported in the city last year, as against 312 cases and 10 resident deaths reported in 1948.

Venereal Disease

Venereal disease cases continued to decline from the peak reported in 1946, and the number of syphilis cases reported in 1949 (8,317) was the lowest for any year since 1933. By the end of 1949, syphilis had dropped to 49% of the number reported in 1946.

Gonorrhea was also down, with 23,432 cases reported for the year compared with 26,323 cases reported in 1948.

New Health Program

With the cooperation of the United States Public Health Service, the Department in 1950 is developing a multiphasic screening program to promote the early detection of heart disease, tuberculosis, diabetes, and other so-called chronic illnesses. The program will operate as a mass health survey. Among the tests to be offered are: A miniature chest X-ray to detect cardiac and non-tuberculous chest disease as well as tuberculosis; a serologic test for syphilis; blood sugar and hemoglobin determination; urinalysis; blood pressure determination; vision and hearing screening, and height and weight measurements. Individuals whose tests suggest the need of medical care will be referred to their private physicians or to appropriate medical clinics for further diagnosis.

MARRIAGES

Dr. Elmer E. Terrell, Paris, to Miss Marjorie Cammon of Olney, recently.

Dr. Blaine L. Ramsay to Mrs. Patricia Ann Viers, both of Chicago, recently.

DEATHS

Joseph Howard Beard, Champaign, who graduated at Johns Hopkins University School of Medicine, Baltimore, in 1912, died March 6, aged 67. He was head of the University of Illinois health service in Champaign since 1916.

Lila Beers, retired, Chicago, who graduated at the Hahnemann Medical College and Hospital, Chicago, in 1897, died March 24, aged 82.

Earl E. Dale, Dwight, who graduated at Chicago College of Medicine and Surgery in 1917, died suddenly March 6, aged 56.

Hugo O. Fenske, Chicago, who graduated at Loyola University School of Medicine in 1942, died in Grant Hospital, March 27, aged 39.

Clarence W. Hopkins, retired, Elmhurst, who graduated at Northwestern University Medical School in 1901, died March 17, aged 77. He was chief surgeon for the Chicago & North Western Railway for many years.

William Henry Lange, Chicago, who graduated at Loyola University School of Medicine in 1919, died December 1, 1949, aged 57.

George M. Lucas, Jacksonville, who graduated at Northwestern University Medical School in 1920, died April 1, aged 55. He had joined the staff of Jacksonville State Hospital in January, 1949.

Charles H. McDonald, Arther, who graduated at Rush Medical College in 1904, died March 3, aged 73.

Thomas Rhea Maxwell, retired, New Berlin, who graduated at the University of Louisville School of Medicine in 1916, died March 13, aged 65.

Cosmo Misischia, Joliet, who graduated at Chicago Medical School in 1932, died March 8, aged 44.

Frank Louis Nathanson, Chicago, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, in 1908, died Feb. 13, aged 68.

Cyrus F. Newcomb, Champaign, who graduated at the University of Illinois College of Medicine in 1904, died recently, aged 70. He was acting director of the Champaign-Urbana Health District at Champaign.

David Martin Rettinger, Stockton, who graduated at Chicago Medical School in 1945, died in St. Francis Hospital, Freeport, February 2, aged 29, of injuries received in an automobile accident.

Colin K. Ross, Newman, who graduated at Bennett College of Eclectic Medicine and Surgery in 1911, died March 16, aged 65, of injuries received in an automobile accident.

Orlando F. Scott, Chicago, who graduated at Rush Medical College in 1908, died March 22, aged 65. He was director of the National Detection of Deception Laboratory.

Lewis Allen Whipple, Peoria, who graduated at Chicago College of Medicine and Surgery in 1905, died suddenly in his home, March 21, aged 74.

"FOR THE COMMON GOOD"

Health Talk in Pioneer Telecast.—On Saturday evening, May 6, "Guardians of Your Sleep" was presented over WBNS-TV as a special session of the Institute for Education by Radio in Columbus, marking the first time that television was made a formal part of the institute. Participants in this telecast, which was presented first over WGN-TV in Chicago, August 10, 1949, were Dr. Max S. Sadove, associate professor and head of the division of anesthesia, University of Illinois College of Medicine; Dr. James H. Cross, clinical assistant in surgery at Illinois; Dr. Allen Talbott, resident in anesthesia, Veterans Administration, Hines; Dr. Theodore R. Van Dellen, assistant dean, Northwestern University Medical School, and Medical Editor of the Chicago Tribune; Mr. Edward Pelikan, senior pharmacology student at Illinois, who portrayed the "patient", and Miss Sarah Timms, R.N., supervising nurse, Surgical Pavilion, Ohio State University Hospital. Cosmo Genovese, WGN-TV producer, was also present.

The Chicago participants went by plane for the presentation. Abbott Laboratories and the Ohio Chemical Company cooperated in the event, with the latter's Columbus dealers, the Columbus Hospital Supply Company and the Wendt-Bristol Company, making equipment available.

Health Talk is presented as a weekly feature by the Educational Committee of the Illinois State Medical Society in cooperation with WGN-TV. Since the last issue of the Illinois Medical Journal, the following telecasts have been presented:

Reading Difficulties in Children, Dr. George E. Park, Alfred Schmiding, March 21, which pointed to the special work being done at Dyslexia Memorial Institute.

Small Game Hunting in Africa, March 28, in which Dr. Carroll Birch showed masks worn by the medicine men of Africa and covered the subject of tropical disease.

The Second Child Arrives, April 4, a repeat telecast with Dr. Lawence Breslow, Mrs Richard Vonalbrecht, Ricky 4, and Bonnie Dhu, six months.

The Rh Factor, April 10, with Israel Davidsohn and Mrs. John Ruberry, Joan, 21 months and Kathleen Anne, two and a half months participating.

Radio

In the series of radio transcriptions over FM Station WFJL, titled **"Your Doctor Speaks"**, the following physicians have participated:

Carlo Scuderi, April 13, Care of the Feet.

Herbert E. Schmitz, April 20, Cancer.

Morris Friedell, April 27, The Atom and Medicine.

Ford K. Hick, May 4, Social Problems Diabetic Patients Have to Meet.

Lectures Arranged Through the Educational Committee:

Hobart Wallace, Peoria, Girls' Physical Education Classes in Chillicothe, March 23, Posture and Poise.

Peter T. Gray, Sterling, Mendota Junior Woman's Club, April 4, in Mendota, Good Health.

Alfred D. Biggs, Taylor School, April 18, Youth Week program, Keeping Solid with Health.

Earle E. Wilson, Oak Park, Ladies Guild, First Gethsemane Lutheran Church, April 19, on Growing Old Gracefully.

Lowell T. Coggeshall, Temple Sholom Men's Club, April 19, Chicago as a Medical Center.

W. W. Bolton, Chicago, Senior Health Education Class at Kelvyn Park High School, April 20, on Mental Well Being.

Alfred S. Traisman, Chicago, "Y" Boys' Mothers Club, April 26, on Understanding the Adolescent.

Eugene T. McEnery, Chicago, Youth Week, Emmet School, May 8, How Tempermental Are You?

Sol Ditkowsky, Hayt Elementary School, Youth Week May 10, Building Body Bones and Beauty.

Robert E. Lee, Hale Elementary School, Youth Week, May 10, Teen-Age Tips on Health.

Harry J. Dooley, The Latones at the YMCA, Chicago, May 10, Sex Education.

Ralph Spaeth, Parker High School, Youth Week, May 11, Teen Age Tips on Health.

Emerson K. McVey, Lowell Girls Club in Harvey, May 17, on Understanding the Adolescent.

Lectures Arranged Through the Scientific Service Committee:

J. Keller Mack, Springfield, Effingham County Medical Society, March 30, in Effingham, on Infant Feeding.

John C. Scully, Chicago, Effingham County Medical Society in Effingham, April 13, on Diseases of the Thyroid.

Harry M. Hedge, Chicago, Bureau County Medical Society and the County Bar Association in Princeton, April 20, Let George Do It: Why Not?

Donald S. Miller, Chicago, DeKalb County Medical Society in DeKalb, April 25, Treatment of Common Fractures of the Hip.

H. Close Hesseltine, Chicago, McDonough County Medical Society in Macomb, April 28, on Therapeutic Advances in Obstetrics.

James R. Webster, Chicago, Bureau County Medical Society in Princeton, May 9, Dermatitis in General Practice.

Eugene F. Traut, Oak Park, and George Byfield, Chicago, St. Anthony May Clinic Day, May 10, on Arthritis and Hypertension, respectively.

Lindon Seed, Chicago, Whiteside and Lee County Medical Societies in Rock Falls, May 11, on Present Status of Surgical Therapy of Goiter.

Paul A. Campbell, Chicago, Effingham County Medical Society in Effingham, May 11, on Dizziness.

Symposium on "What's New in Medicine", Will-Grudy County Chapter of the Illinois Chapter of the American Academy of General Practice, May 17, in Joliet: John J. Fahey, senior orthopedic surgeon, St. Francis Hospital, Evanston; Harold C, Boris, clinical professor of neurosurgery, Stritch School of Medicine of Loyola University, and J. Charles McMillan, assistant clinical professor of medicine, University of Illinois College of Medicine.

Philip Thorek, Chicago, Effingham County Medical Society in Effingham, June 8, on Abdominal Surgery.

Louis R. Limarzi, Chicago, Iroquois County Medical Society in Watseka, June 20, on Management of the More Common Blood Disorders.

Postgraduate Conference in Peoria.— A Postgraduate Conference for the Fourth Councilor District was held at the Pere Marquette Hotel, Peoria, April 20, with the Peoria Medical Society acting as host and with James W. Sours, Peoria, and Charles P. Blair, Councilor of the District, presiding. The following Chicago speakers participated:

Eugene F. Traut, clinical associate professor of medicine, University of Illinois College of Medicine, Arthritis: Current Treatment.

Edwin Irons, attending staff, Presbyterian Hospital, Treatment of Infectious Diseases: The Newer antibiotics.

Eugene A. Hamilton, clinical instructor in bone and joint surgery, Stritch School of Medicine of Loyola University, Low Back Pain.

Lindon Seed, clinical associate professor of surgery at Illinois, Acute Conditions of the Abdomen: Early Diagnosis.

Louis R. Limarzi, associate professor of medicine at Illinois, Infectious Mononucleosis.

A roundtable concluded the afternoon session. In the evening, following dinner, William A. Brams, associate professor of medicine, Northwestern University Medicine School, discussed Treatment of Heart Disease.

REPORT NEW TREATMENT FOR CARBON MONOXIDE POISONING

Chicago—Treatment of suffocation from carbon monoxide gas by injections of procaine hydrochloride, a local anesthetic, is reported in the April 8th Journal of the American Medical Association by three Los Angeles doctors.

Seventeen of a group of 23 patients who received the new treatment made good recoveries, Drs. Edwin W. Amyes, John W. Ray and Norman W. Brockman of the College of Medical Evangelists and University of Southern California School of Medicine say.

The remaining six patients either died or did not fully recover. In this group the drug was given long after the exposure to carbon monoxide, or there were additional complicating factors, according to the doctors.

All except one of the 23 patients had become unconscious in a room in which there was no ventilation and where an open gas flame was burning.

Procaine hydrochloride previously had been used by doctors in France to treat prolonged coma due to carbon monoxide poisoning. They reported startling improvement in a few cases, the Los Angeles doctors say. Treatment of this condition theretofore had been unsatisfactory.

Studies indicate that carbon monoxide suffocation results in a disturbance of the blood supply of the brain. The Los Angeles doctors believe that part of the effect of procaine hydrochloride in carbon monoxide suffocation may be due to stimulation of the brain.